
Does Insider Trading Law Change Behavior? An Empirical Analysis

Menesh S. Patel*

*Few issues in securities law have excited the popular imagination and generated scholarly interest like insider trading. Yet, a simple but foundational question about insider trading law has received relatively little scholarly attention: Does insider trading law actually influence the amount of insider trading that occurs? This Article tackles this question in the context of one of the highest-profile changes in insider trading law in decades — the Second Circuit’s seminal 2014 decision in *United States v. Newman*, which substantially weakened insider trading law concerning so-called “tippee” liability. The Article’s empirical approach exploits Newman’s change in law to evaluate the effects of changes in insider trading law on insider trading. The Article focuses on insider trading in advance of mergers announced in periods before and after Newman and, for its measure of the extent of insider trading, uses the run-up in the stock price of the merger target in advance of the merger’s public announcement. Based on that measure, the Article finds that Newman had a dramatic effect on insider trading, with significantly greater insider trading occurring after Newman than before, thereby providing strong empirical evidence that insider trading is responsive to changes in insider trading law. The Article provides the first empirical analysis of whether a specific judicial change in insider trading law can influence the amount of insider trading beyond just the trading of corporate insiders. The Article’s empirical findings advance*

* Copyright © 2019 Menesh S. Patel. Acting Professor of Law, UC Davis School of Law. For helpful comments, I thank Patrick Augustin, Miriam Baer, David Bjerk, John Coffee, Marcus Cole, Merritt Fox, Larry Glisten, Joseph Grundfest, Michael Klausner, Donald Langevoort, James Park, Gabriel Rauterberg, and Holger Spamann, as well as participants at the 2018 Annual Meeting of the American Law and Economics Association, the 2018 National Business Law Scholars Conference, the Harvard Law and Economics Seminar, and workshops at Boston University School of Law, Brooklyn Law School, Drexel University School of Law (Kline), St. John’s University School of Law, UC Davis School of Law, University of Chicago Law School, University of Florida School of Law (Levin), University of Miami School of Law, University of Michigan School of Law, and the University of Richmond School of Law.

our understanding of the functioning of securities law and inform important policy debates concerning insider trading.

TABLE OF CONTENTS

INTRODUCTION	449
I. THE LEGAL LANDSCAPE: NEWMAN'S SUBSTANTIAL WEAKENING OF INSIDER TRADING LAW	453
A. <i>Insider Trading Law and Tippee Liability</i>	453
B. <i>The Pre-Newman Crackdown on Insider Trading</i>	456
C. <i>Newman and its Effects on Insider Trading Law</i>	460
D. <i>The Immediate Response to Newman and the Post-Newman Period</i>	463
II. USING NEWMAN TO EMPIRICALLY ASSESS THE EFFECTS OF A CHANGE IN INSIDER TRADING LAW	467
A. <i>Focus of Analysis: Merger Announcements</i>	468
B. <i>The Run-Up as a Measure of Insider Trading</i>	470
C. <i>Calculating the Run-Up</i>	474
D. <i>Rumors and Other Variables</i>	476
III. EMPIRICAL FINDINGS: THE EFFECTS OF NEWMAN ON INSIDER TRADING	479
A. <i>Newman's Dramatic Effects on Insider Trading as Reflected by Higher Average Run-Ups</i>	479
B. <i>Rumored Deals</i>	484
C. <i>Regression Analysis</i>	487
D. <i>The Pronounced Then Dampened Effects of Newman</i>	491
IV. DISCUSSION AND POLICY IMPLICATIONS	496
A. <i>The Effects of Doctrinal Change on Insider Trading</i>	496
B. <i>Enforcement of Insider Trading Law</i>	501
C. <i>The Optimal Regulation of Insider Trading</i>	504
D. <i>Additional Avenues for Future Research</i>	506
CONCLUSION.....	507

INTRODUCTION

A number of important questions animate scholarly discussion of insider trading law. Is insider trading socially harmful or beneficial?¹ Should insider trading be proscribed by law or be subject to private ordering?² How far should insider trading law sweep?³ Should there be a federal insider trading statute?⁴ Despite the extensive scholarship on insider trading, relatively little scholarly attention has been directed to a basic but fundamental question underlying insider trading law: Does insider trading law actually affect the amount of insider trading that occurs? This Article's objective is to empirically analyze that central question. It does so by leveraging a change in insider trading law that occurred in 2014 when the Second Circuit issued its seminal decision in *United States v. Newman*,⁵ which substantially limited the scope of insider trading liability in the so-called "tipping" context.

In 2009, the United States, primarily through the Department of Justice's ("DOJ") Southern District of New York office, commenced a wide-scale and well-publicized crackdown on insider trading. Those efforts targeted insider trading by hedge fund professionals and other sophisticated traders, who were considered by many to routinely trade on material, non-public information in violation of securities law. As part of that crackdown, the DOJ brought dozens of criminal insider trading cases against Wall Street professionals, many of which resulted in multiyear prison sentences. The Securities and Exchange Commission ("SEC") was also heavily involved and used civil actions and administrative proceedings to impose substantial civil liability on Wall Street professionals and others.

The government's insider trading cases were predicated in large part on a theory of tipper-tippee liability. This legal theory of insider trading concerns the circumstances in which some party with a duty to not disclose confidential information, such as a corporate insider (the "tipper"), nonetheless discloses confidential, material information to another party (the "tippee"), who then trades on the basis of that information. The bulk of the defendants in the government's cases were

¹ See, e.g., Dennis W. Carlton & Daniel R. Fischel, *The Regulation of Insider Trading*, 35 STAN. L. REV. 857, 866-82 (1983).

² See, e.g., James D. Cox, *Insider Trading and Contracting: A Critical Response to the "Chicago School"*, 4 DUKE L.J. 628, 630 (1986).

³ See, e.g., Zachary J. Gubler, *A Unified Theory of Insider Trading Law*, 15 GEO. L.J. 1225 (2017).

⁴ See, e.g., Roberta S. Karmel, *The Law on Insider Trading Lacks Needed Definition*, 68 SMU L. REV. 757, 758 (2015).

⁵ 773 F.3d 438 (2d Cir. 2014).

tippees, sometimes remote tippees who were many steps removed from the original source of the confidential information.

The law of tippee liability remained relatively unchanged during the first five years of the government's crackdown of insider trading. That all changed in December 2014, when the Second Circuit upended insider trading law and issued *Newman*, a decision in which the Second Circuit — a court sometimes referred to as the “Mother Court” of securities law⁶ — imposed significant limitations on the scope of tippee liability. *Newman* was a direct response to the Second Circuit panel's perception of prosecutorial overreach and marked a sea change in insider trading law. The decision significantly curtailed the government's ability to prosecute tippees, especially remote tippees such as the defendants in *Newman*.

In addition to its doctrinal importance, *Newman* provides an ideal mechanism with which to empirically evaluate whether changes in insider trading law generate changes in insider trading. First, because insider trading law as it relates to tippee liability remained largely unchanged in the period leading up to *Newman* and the period immediately after *Newman*, *Newman* lends itself to an empirically sound analysis of the law's effect on insider trading by comparing the extent of insider trading before and after *Newman*. Second, because of subsequent legal developments, the law of tippee liability changed again, nearly seven months after *Newman*. In July 2015, the Ninth Circuit issued its decision in *United States v. Salman*,⁷ in which it refused to adopt *Newman* and created a circuit split on the scope of tippee liability that the Supreme Court would ultimately resolve.⁸ The Ninth Circuit's decision provides a natural endpoint with which to evaluate *Newman*'s effect on insider trading but also is itself amenable to empirical analysis, such as a determination of whether the Ninth Circuit's decision exerted a mitigating influence on *Newman*'s effect on insider trading.

This Article's empirical methodology takes advantage of the fact that while insider trading generally cannot be directly observed, other observable measures serve as good reflections of it. As its measure of insider trading, this Article uses the run-up in the stock price of merger targets in advance of merger announcements.⁹ The run-up is formally

⁶ See *Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723, 762 (1975) (Blackmun, J., dissenting).

⁷ 792 F.3d 1087 (9th Cir. 2015).

⁸ See *Salman v. United States*, 137 S. Ct. 420, 421-22 (2016).

⁹ The Article uses the term “mergers” throughout as a generic reference to the more general category of deals involving both business combinations and complete acquisitions of a company's stock. See *infra* Part II.A.

calculated using event study methodology. The basic idea is that if there is insider trading in the stock of a merger target in advance of the merger's public announcement, that trading will be reflected in upward pressure in the target's stock price and cause the stock price to exceed its expected price, that is, insider trading will generate abnormal returns to the target's stock price. While things other than insider trading may cause run-ups in advance of a merger announcement, a higher run-up represents greater insider trading, all else equal. Financial economists and legal scholars use the run-up as a measure of insider trading, and studies have empirically demonstrated a connection between the run-up and insider trading.¹⁰

The Article empirically assesses *Newman*'s effect on insider trading by comparing the average run-up of targets of mergers announced in a period preceding *Newman* with the average run-up of targets of mergers in the period after *Newman* but before the Ninth Circuit's decision in *Salman*. The empirical analysis shows that, as measured by target run-ups, *Newman* had a statistically significant and pronounced effect on the extent of insider trading. The average target run-up in the post-*Newman* period was more than *three times higher* than the average target run-up in the pre-*Newman* period. The empirical methodology accounts for rumors in news stories that preceded the mergers, as such rumors can generate run-ups apart from any effects of insider trading. The analysis finds that the substantial difference between average target run-ups after *Newman* and before *Newman* persists after controlling for deal rumors and other variables.

This Article thus provides strong empirical evidence that changes in insider trading law do affect the extent of insider trading that occurs and that the effect can be substantial. While there have been other empirical studies evaluating how insider trading responds to changes in insider trading law or to changes in the enforcement of insider trading law,¹¹ this Article provides the first empirical analysis of how a specific judicial change in insider trading law can affect insider trading beyond just the effects on corporate insiders. Because, at least in the United States, insider trading law evolves primarily through changes in case law, rather than statutory or SEC rule changes, understanding the relationship between insider trading law and insider trading necessitates an understanding of the extent to which judicial pronouncements of insider trading law can affect insider trading. This Article facilitates our understanding of

¹⁰ See *infra* Part II.B.

¹¹ For discussion of these studies, see, for example, *infra* notes 197–198, 200, 209–210 and accompanying text.

securities law by empirically demonstrating that courts' insider trading decisions can significantly influence the amount of insider trading. Though there are intuitive reasons to believe that traders, especially sophisticated professional traders, will modify their trading behavior in response to changes in insider trading law, there are also reasons why such behavior may be impervious or at least only weakly responsive to change in law. This Article provides strong empirical evidence that changes in insider trading law do affect the extent of insider trading and that the effect can be substantial.

The Article's empirical analysis generates other valuable findings. Among other things, the analysis shows that, as measured by target run-ups, *Newman* had an especially dramatic effect on insider trading in the first few months after it was issued. The associated increase in insider trading constituted a reversion back to insider trading levels that had not been seen in decades. These short-term effects of *Newman* also corroborate the dire predictions made by prosecutors and others at the time that the Second Circuit's decision would have immediate and significant consequences on traders' ability to more readily engage in insider trading outside of the reach of the law.¹²

The analysis also demonstrates that in periods after *Newman*, the high levels of insider trading generated by the decision started abating. The Article argues that this lessening of *Newman*'s effect on insider trading can be attributed to subsequent district court opinions that narrowed or made uncertain *Newman*'s potential impact on insider trading law. This finding demonstrates the often underemphasized point that district court decisions exist alongside appellate decisions and play an important role in shaping behavior and the contours of the law. These and the Article's other empirical findings also inform important policy debates pertinent to insider trading law and motivate additional areas of research into insider trading and insider trading law, as discussed below.¹³

The Article proceeds as follows. Part I provides a discussion of *Newman*, the circumstances leading up to the decision, and the relevant subsequent doctrinal and other developments. Part II discusses the Article's empirical methodology, including a discussion of the merger target run-ups the Article uses to evaluate *Newman*'s effect on insider trading. Part III provides the Article's empirical findings, starting with the core finding showing that *Newman* had a statistically significant and economically meaningful impact on insider trading as measured by

¹² See *infra* note 196 and accompanying text.

¹³ See *infra* Part IV.

merger target run-ups. Part IV discusses the empirical results and their policy implications.

I. THE LEGAL LANDSCAPE: NEWMAN'S SUBSTANTIAL WEAKENING OF INSIDER TRADING LAW

Through its *Newman* decision, the Second Circuit significantly weakened insider trading law. To highlight *Newman*'s effect on insider trading law, and to aid in framing the empirical analysis and interpreting the empirical results, this Part provides, in Section A, a short summary of insider trading law and, in Section B, a short summary of the government's crackdown on insider trading, which was largely predicated on the theory of tippee liability that *Newman* would pare back. Section C then discusses *Newman* and its effect on insider trading law. Section D discusses the immediate response to *Newman*, including on pending insider trading prosecutions, and also discusses doctrinal developments following *Newman* relevant to the empirical analysis.

A. Insider Trading Law and Tippee Liability

Insider trading is within the scope of federal law, even though no federal statute expressly prohibits insider trading. Insider trading is a type of securities fraud prohibited by Section 10(b) of the Securities Exchange Act of 1934, 15 U.S.C. § 78j(b) (2019) ("Section 10(b)"), and SEC Rule 10b-5, 17 C.F.R. 240.10b-5 (2019) ("Rule 10b-5").¹⁴ In addition to civil penalties, a willful violation of Section 10(b) or SEC Rule 10b-5 can subject the defendant to criminal liability and criminal penalties, including up to twenty years in jail.¹⁵ Insider trading may also violate the federal wire and fraud statutes¹⁶ or Section 807 of the Sarbanes-Oxley Act.¹⁷ In addition, SEC Rule 14e-3, 17 C.F.R. § 240.14e-3 (2019), specifically prohibits insider trading in connection with a

¹⁴ See *Chiarella v. United States*, 445 U.S. 222, 225-26 (1980).

¹⁵ 15 U.S.C. § 78ff(a) (2019).

¹⁶ See, e.g., 18 U.S.C. § 1341 (2019) (mail fraud); *id.* at § 1343 (2019) (wire fraud). For analysis of application of the federal mail and wire fraud statutes to insider trading, see generally William K.S. Wang, *Application of the Federal Mail and Wire Fraud Statutes to Criminal Liability for Stock Market Insider Trading and Tipping*, 70 U. MIAMI L. REV. 220 (2015).

¹⁷ 18 U.S.C. § 1348 (2019). For a discussion of Section 807 and insider trading, see STEPHEN M. BAINBRIDGE, *INSIDER TRADING LAW AND POLICY* 172-74 (2014).

tender offer.¹⁸ Additional federal statutes and rules concern issues pertinent to insider trading.¹⁹

Courts have articulated two theories of insider trading that can form the basis of a claim under Section 10(b) and Rule 10b-5: the classical theory and the misappropriation theory. The classical theory is directed at corporate insiders²⁰ and prohibits such persons from trading in their corporation's securities on the basis of material, nonpublic information about the corporation.²¹ The classical theory finds its doctrinal mooring in the fiduciary duties a corporate insider owes the corporation's shareholders. A corporate insider who trades on material, nonpublic information breaches those duties and commits securities fraud.²² On the other hand, while the classical theory premises liability on the trader's breach of a duty owed to the counterparty of the trade, the misappropriation theory premises liability on breach of a duty owed to the source of the confidential information.²³

Instead of trading on material, nonpublic information, a corporate insider or misappropriator (the "tipper") may instead relay, or tip, the confidential information to another person (the "tippee"), who themselves may trade on that information. For example, a corporate executive who knows that her company will be announcing a successful clinical trial involving a breakthrough drug may relay that information to another person, who in turn may trade in the company's stock based on that confidential information. Because the tippee likely owes no duties to the corporation's shareholders, in case the tipper was an insider, or to the source of the confidential information, in case the tipper misappropriated the information, the question arises whether the tippee's trading on the confidential information constitutes unlawful insider trading.

Dirks v. SEC is the Supreme Court's leading case on tippee liability.²⁴ Writing for the majority in *Dirks*, Justice Powell crafted the rule for tippee liability in a classical case where the tipper was a corporate

¹⁸ For Rule 14e-3 to be implicated, the bidder must have commenced or taken substantial steps to commence a tender offer. 17 C.F.R. § 240.14e-3(a) (2019).

¹⁹ See, e.g., 15 U.S.C. § 78p (2019) (short swing transactions); Regulation FD, 17 C.F.R. § 243.100(a) (2019) (public disclosure of selectively disclosed material information).

²⁰ For a discussion of the classes of individuals deemed to be insiders for purposes of the classical theory, see DONALD C. LANGEVOORT, INSIDER TRADING: REGULATION, ENFORCEMENT AND PREVENTION § 3:2-9 (2017).

²¹ See *Chiarella v. United States*, 445 U.S. 222, 231 (1980).

²² See *id.* at 227-30.

²³ *United States v. O'Hagan*, 521 U.S. 642, 652-53 (1997).

²⁴ *Dirks v. SEC*, 463 U.S. 646 (1983).

insider. The Court first framed its analysis by explaining that the tippee's liability is derivative of the insider's liability and arises from the tippee's role as a "participant after the fact in the insider's breach of a fiduciary duty."²⁵ For that reason, the Court explained, a tippee who trades on material, nonpublic information from a corporate insider engages in unlawful insider trading in violation of Section 10(b) and Rule 10b-5 only if (1) the insider breached their fiduciary duty to shareholders by disclosing the confidential information; and (2) the tippee knew or should have known of the insider's breach.²⁶ The first part of this rule focuses on the tipper's breach, while the second part focuses on the tippee's knowledge.²⁷

The Court also identified the circumstances under which an insider commits a breach for the purpose of satisfying the first part of its enunciated rule for tippee liability. As the Court explained, an insider who discloses confidential information is deemed to have breached their duty to shareholders if the *insider personally benefited*, directly or indirectly, from their disclosure.²⁸ *Dirks'* personal benefit test is a defining aspect of the law of tippee liability.²⁹

The Court in *Dirks* did not expressly define "personal benefit" and instead instructed lower courts to "focus on objective criteria, i.e., whether the insider receives a direct or indirect personal benefit from the disclosure, such as a pecuniary gain or a reputational benefit that

²⁵ *Id.* at 659 (citing *Chiarella*, 445 U.S. at 230 n.12).

²⁶ *Id.* at 660.

²⁷ These are a subset of the elements of tippee liability. For a discussion of the other elements, see BAINBRIDGE, *supra* note 17, at 65-81.

²⁸ *Dirks*, 463 U.S. at 662. The Supreme Court has not yet decided whether *Dirks'* personal benefit test applies in misappropriation cases. See *Salman v. United States*, 137 S. Ct. 420, 427 n.2 (2016) ("We need not resolve the question [whether *Dirks'* personal benefit test applies to misappropriation cases]. The parties do not dispute that *Dirks'* personal-benefit analysis applies in both classical and misappropriation cases, so we will proceed on the assumption that it does."). However, some lower courts have held or stated that the rule for tippee liability in a misappropriation case is the same as in a classical case. See, e.g., *SEC v. Obus*, 693 F.3d 276, 285-86 (2d Cir. 2012) ("The Supreme Court's tipping liability doctrine was developed in a classical case, *Dirks*, but the same analysis governs in a misappropriation case."); *SEC v. Yun*, 327 F.3d 1263, 1275 (11th Cir. 2003) (holding that *Dirks'* personal benefit test applies in a misappropriation case). Some scholars have argued that *Dirks'* personal benefit test should apply to misappropriation cases. See, e.g., LANGEVOORT, *supra* note 20, § 3:2. But others have argued otherwise. See, e.g., Merritt B. Fox & George N. Tepe, *Personal Benefit has no Place in Misappropriation Tipping Cases*, 71 SMU L. REV. 767 (2018).

²⁹ For a detailed discussion of the judicial history of *Dirks'* personal benefit requirement, see generally A.C. Pritchard, *Dirks and the Genesis of Personal Benefit*, 68 SMU L. REV. 857 (2015).

will translate into future earnings.”³⁰ The Court also explained that a personal benefit to the tipper can “often” be inferred from “objective facts and circumstances.”³¹ In particular, the Court held that “[t]he elements of fiduciary duty and exploitation of nonpublic information also exist when an insider makes a gift of confidential information to a trading relative or friend.”³² Under this gift-giving principle, if a tipper discloses confidential information to a trading relative or friend, then *Dirks* gives rise to an inference that the tipper personally benefitted from the disclosure, because in such a circumstance, “giving a gift of trading information to a trading relative is the same thing as trading by the tipper followed by a gift of the proceeds.”³³ *Dirks*’ gift-giving principle would assume a central role in *Newman* and subsequent cases, as discussed below.

B. *The Pre-Newman Crackdown on Insider Trading*

The scope of tippee liability assumed significant practical importance starting in the late 2000s, when the DOJ and the SEC significantly ratcheted up insider trading enforcement and brought dozens of insider trading cases against Wall Street professionals alleged to be tippees of material, nonpublic information.³⁴ These enforcement efforts found their genesis in a growing perception that insider trading was widespread among certain segments of the professional trading community, including hedge funds, which were singled out as the worst offenders and considered by some to routinely trade on confidential information that had been tipped to them by corporate insiders or misappropriators.³⁵

In response, in the late 2000s the Department of Justice’s Southern District of New York office, led by the office’s United States Attorney at

³⁰ *Dirks*, 463 U.S. at 663. A chief policy reason motivating the Court to impose the requirement that the tipper must have received a personal benefit for there to have been an insider trading violation was to not disincentivize market analysts from ferreting out and analyzing corporate information, which serves to enhance the informational value of stock prices and enhance market efficiency. *See id.* at 658, 658 n.17.

³¹ *Id.* at 664.

³² *Id.*

³³ *Salman*, 137 S. Ct. at 422.

³⁴ *See Timeline: A History of Insider Trading*, N.Y. TIMES (Dec. 6, 2016), <https://www.nytimes.com/interactive/2016/12/06/business/dealbook/insider-trading-timeline.html>.

³⁵ *See* Michael D. Trager, Richard L. Jacobson & Christopher Rhee, *The SEC’s New Focus on Insider Trading by Hedge Funds*, HEDGE FUND L. REP., June 2010, at 1 (“There is a longstanding and widespread belief among law enforcement personnel that insider trading involving hedge funds is a systematic problem.”).

the time, Preet Bharara, commenced a widespread and well-publicized crackdown of insider trading by hedge fund professionals and other sophisticated traders.³⁶ Those efforts resulted in the successful prosecution of dozens of Wall Street professionals and sent shockwaves throughout the professional investor industry.³⁷ The SEC worked in tandem with the DOJ and brought numerous insider trading civil cases and administrative actions against hedge funds and other Wall Street professionals.³⁸ The FBI was also heavily involved in the investigation of hedge fund insider trading — dubbed “Operation Perfect Hedge” by the FBI³⁹ — and secured important evidence that the DOJ and SEC would ultimately use to support their cases.⁴⁰

A harbinger of the enforcement to come occurred in March 2007, when the DOJ and SEC filed criminal and civil cases against members of a large insider trading ring. The insider trading ring was orchestrated by hedge funds and other Wall Street professionals who allegedly made millions by unlawfully trading on the basis of material, nonpublic information.⁴¹ The SEC used the case as an opportunity to send a strong message to hedge funds, with the SEC Chair announcing that the action makes “very clear the SEC is targeting hedge fund insider trading as a top priority.”⁴² Shortly thereafter, the SEC announced that it had created a new hedge fund task force within its Division of Enforcement

³⁶ Jason M. Breslow, *Preet Bharara: Insider Trading Is “Rampant” on Wall Street*, PBS FRONTLINE (Jan. 7, 2014), <https://www.pbs.org/wgbh/frontline/article/preet-bharara-insider-trading-is-rampant-on-wall-street>.

³⁷ See Erin Geiger Smith, *Prosecutor Preet Bharara Is the New Wall Street Nightmare*, BUS. INSIDER (Oct. 20, 2009, 4:14 AM), <https://www.businessinsider.com/wall-street-should-be-scared-of-manhattans-new-top-prosecutor-2009-10>; *Timeline: A History of Insider Trading*, *supra* note 34.

³⁸ See *Timeline: A History of Insider Trading*, *supra* note 34.

³⁹ *Prepared Remarks of Assistant Director in Charge Janice K. Fedarcyk on Insider Trading Arrests*, FED. BUREAU OF INVESTIGATION (Jan. 18, 2012), <https://archives.fbi.gov/archives/newyork/press-releases/2012/prepared-remarks-of-assistant-director-in-charge-janice-k.-fedarcyk-on-insider-trading-arrests> [<https://perma.cc/R4TW-EVJD>].

⁴⁰ See, e.g., Ailsa Chang, *Wall Street Wiretaps: Investigators Use Insiders’ Own Words To Convict Them*, NPR (Dec. 26, 2012, 3:25 AM), <http://www.npr.org/2012/12/26/168021457/wall-street-wiretaps-investigators-use-insiders-own-words-to-convict-them> (discussing the FBI’s role in obtaining wiretap and other evidence used in insider trading prosecutions).

⁴¹ Press Release, Sec. & Exch. Comm’n, SEC Charges 14 in Wall Street Insider Trading Ring (Mar. 1, 2007), <https://www.sec.gov/news/press/2007/2007-28.htm> [hereinafter SEC Charges 14]; Press Release, U.S. Dep’t of Justice, UBS Executive and Former Morgan Stanley Lawyer Among 13 Charged In Massive Insider Trading Schemes (Mar. 1, 2007), <https://www.justice.gov/archive/usao/nys/pressreleases/March07/ubsinsidertradingpr.pdf> [<https://perma.cc/YZZ7-J29P>].

⁴² SEC Charges 14, *supra* note 41.

dedicated to scrutinizing hedge funds, including potential hedge fund insider trading.⁴³

The DOJ's crackdown on insider trading started in earnest on October 16, 2009, when Bharara's office filed criminal charges against Raj Rajaratnam, the billionaire founder of the Galleon Group, one of the largest hedge funds at the time, and others involved in the unlawful scheme.⁴⁴ The suit was a landmark case within the universe of insider trading prosecutions and demonstrated for the first time that the DOJ was willing to use wiretap evidence in significant insider trading cases.⁴⁵ The SEC coordinated efforts with the DOJ and filed a civil case against Rajaratnam and others also on October 16, 2009.⁴⁶

Like the other insider trading cases to follow, the DOJ and SEC's complaints against Rajaratnam were based on allegations of tippee liability — various insiders were alleged to have tipped material, nonpublic information to Rajaratnam, who then traded based on that information.⁴⁷ Rajaratnam ultimately was found guilty and sentenced to eleven years in prison, which was the longest sentence to ever have been imposed for insider trading.⁴⁸ The \$92.8 million civil penalty imposed in the SEC's civil case was also the largest penalty ever imposed in an SEC insider trading case.⁴⁹

⁴³ Marc L. Mukasey et al., *SEC Turns Up Heat On Hedge Funds*, LAW360 (Aug. 17, 2007, 12:00 AM), <https://www.law360.com/articles/32849/sec-turns-up-heat-on-hedge-funds>.

⁴⁴ Press Release, Preet Bharara, U.S. Attorney, Hedge Fund Insider Trading Takedown: Prepared Remarks (Oct. 16, 2009), <https://www.justice.gov/archive/usao/nys/pressreleases/October09/hedgfund/hedgfundinsidertradingremarks101609.pdf> [<https://perma.cc/79HQ-L9S5>].

⁴⁵ See *id.*

⁴⁶ Press Release, Sec. & Exch. Comm'n, SEC Charges Billionaire Hedge Fund Manager Raj Rajaratnam With Insider Trading (Oct. 16, 2009), <https://www.sec.gov/litigation/litreleases/2009/lr21255.htm> [<https://perma.cc/N3T7-YWP5>].

⁴⁷ See Complaint at 4-5, *SEC v. Galleon Mgmt., LP*, 274 F.R.D. 120 (S.D.N.Y. 2011) (No. 09 Civ. 8811(JSR)); Complaint at 1-2, *United States v. Rajaratnam* (S.D.N.Y. 2010) (No. 09 Cr. 1184(RJH)), 2010 WL 4867402. The SEC twice amended its complaint over the course of the litigation alleging additional bases for Rajaratnam's liability. See Second Amended Complaint at 25, 37, 45-47, *Galleon Mgmt., LP*, 274 F.R.D. 120 (No. 09 Civ. 8811(JSR)).

⁴⁸ Press Release, Fed. Bureau of Investigation, Hedge Fund Founder Raj Rajaratnam Sentenced in Manhattan Federal Court to 11 Years in Prison for Insider Trading Crimes (Oct. 13, 2011), <https://archives.fbi.gov/archives/newyork/press-releases/2011/hedge-fund-founder-raj-rajaratnam-sentenced-in-manhattan-federal-court-to-11-years-in-prison-for-insider-trading-crimes> [<https://perma.cc/9TQX-KW7U>].

⁴⁹ Peter Lattman, *Rajaratnam Ordered to Pay \$92.8 Million Penalty*, N.Y. TIMES (Nov. 8, 2011, 6:44 PM), <https://dealbook.nytimes.com/2011/11/08/rajaratnam-ordered-to-pay-92-8-million-penalty/?mcubz=1>.

In the years after filing their suits against Rajaratnam, the DOJ and the SEC continued to direct significant enforcement efforts to targeting insider trading by hedge funds and other Wall Street professionals. In a widely reported speech delivered almost a year after bringing charges against Rajaratnam, Bharara, who spearheaded the DOJ's efforts, described insider trading as "rampant" and explained that his office was committed to making the prosecution of insider trading a top criminal priority.⁵⁰ The SEC's Director of Enforcement at the time, Robert Khuzami, similarly committed that the SEC would continue to "root out insider trading on Wall Street and in the hedge fund industry."⁵¹

The DOJ and SEC followed through on their commitments to vigorously enforce insider trading law against hedge fund and other market professionals. In 2009 and beyond, the DOJ and SEC brought a steady stream of criminal and civil insider trading cases, resulting in a number of high profile convictions and the imposition of substantial monetary penalties.⁵² In just the twenty months after it filed its complaint against Rajaratnam, Bharara's Southern District of New York office had charged almost fifty more defendants with insider trading.⁵³ For its part, the SEC also expanded its enforcement efforts.⁵⁴ By February 2014, the number of defendants charged just by Bharara's Southern District of New York office since it had charged Rajaratnam

⁵⁰ Preet Bharara, U.S. Attorney, Address at New York City Bar Association: The Future of White Collar Enforcement: A Prosecutor's View (Oct. 20, 2010), <https://www.justice.gov/usao-sdny/speech/future-white-collar-enforcement-prosecutor-s-view-prepared-remarks-us-attorney>. In a speech given about three years earlier, then SEC enforcement director Linda Chatman Thomsen similarly characterized insider trading as rampant on Wall Street and predicted more insider trading cases. Rachele Younglai, *SEC Sees "Rampant" Insider Trading on Wall Street*, REUTERS (Oct. 25, 2007, 3:48 PM), <http://www.reuters.com/article/businesspro-insidertrading-sec-dc/sec-sees-rampant-insider-trading-on-wall-street-idUSN2523981920071025>.

⁵¹ Robert Khuzami, Director, Division of Enft, Sec. & Exch. Comm'n, Remarks at November 5, 2009 Press Conference (Nov. 5, 2009), <https://www.sec.gov/news/speech/2009/spch110509rk.htm>.

⁵² See Breslow, *supra* note 36; *Timeline: A History of Insider Trading*, *supra* note 34.

⁵³ See Preet Bharara, U.S. Attorney, Remarks at the New York Financial Writers Association at the CUNY School of Journalism (June 6, 2011), <https://www.justice.gov/usao-sdny/speech/prepared-remarks-us-attorney-preet-bharara-new-york-financial-writers-association>.

⁵⁴ See M. Todd Henderson, *The Changing Demand for Insider Trading Regulation*, in RESEARCH HANDBOOK ON INSIDER TRADING 243 (Stephen M. Bainbridge ed., 2013) (providing data from 1994 to 2010 showing an increase in the percentage of SEC insider trading cases asserted against market professionals); Trager et al., *supra* note 35 (discussing the SEC's "unprecedented level of enforcement attention" on insider trading).

had grown to eighty-nine.⁵⁵ The office had convicted seventy-nine of those eighty-nine defendants by February 2014 and the cases of the remaining ten defendants were still pending as of that date.⁵⁶ It is not at all surprising, therefore, for the *Wall Street Journal* to have characterized the DOJ's "unprecedented wave of prosecutions" against investment professionals as "rocking Wall Street."⁵⁷

C. *Newman* and its Effects on Insider Trading Law

It was against the backdrop of the DOJ's crackdown on insider trading that the Second Circuit issued its *Newman* decision in December 2014, which substantially weakened insider trading law as it relates to tippee liability. In the prosecution at issue in *Newman*, the DOJ had charged and successfully convicted two hedge fund managers of insider trading in connection with material, nonpublic confidential information they had indirectly obtained from insiders at two public companies.⁵⁸ The two managers were several steps removed from the corporate insiders but were nonetheless found guilty of insider trading.⁵⁹ The defendants were sentenced to fifty-four months' and seventy-eight months'

⁵⁵ Julia La Roche, *Here's Preet Bharara's Amazing 79-0 Insider Trading Conviction Score Card*, BUS. INSIDER (Feb. 6, 2014, 1:30 PM), <http://www.businessinsider.com/bharara-insider-trading-convictions-2014-2>. During this period, other DOJ offices also filed insider trading cases against hedge funds and other professional investors. See, e.g., Press Release, U.S. Dep't of Justice, Former Portfolio Manager For New York Hedge Fund Pleads Guilty To Multi-Million Dollar Insider Trading Conspiracy (Nov. 14, 2013), <https://www.justice.gov/usao-ndga/pr/former-portfolio-manager-new-york-hedge-fund-pleads-guilty-multi-million-dollar-insider> [<https://perma.cc/BA6G-3PAX>] (discussing an insider trading case against hedge fund portfolio manager filed by DOJ's Northern District of Georgia office).

⁵⁶ La Roche, *supra* note 55.

⁵⁷ Michael Rothfeld, Susan Pulliam & Chad Bray, *Fund Titan Found Guilty*, WALL ST. J. (May 12, 2011, 12:01 AM), <https://www.wsj.com/articles/SB10001424052748703864204576317060246641834>.

⁵⁸ The substantive violation in *Newman* was securities fraud in violation of Section 10(b) and Rule 10b-5 and conspiracy to commit securities fraud in violation of 18 U.S.C. § 371. *United States v. Newman*, 773 F.3d 438, 442-43 (2d Cir. 2014).

⁵⁹ *Id.* at 438. With respect to the confidential information about one company (Dell), one analyst was three steps removed from the corporate insider who tipped the information (in the sense that the insider tipped the information to A, who then tipped the information to B, who then tipped the information to the analyst), while the other analyst was four steps removed. *Id.* at 443. Both analysts were four steps removed from the corporate insider with respect to the other company's (NVIDIA) confidential information. *Id.*

imprisonment and were ordered to pay millions of dollars in fines and forfeiture.⁶⁰

In *Newman*, the Second Circuit unanimously reversed the hedge fund managers' convictions and articulated a new standard for tippee liability that significantly narrowed its reach, especially with respect to remote tippees like the managers in *Newman*.⁶¹ The court put aside any doubt that *Newman* was a direct response to what the panel perceived as the DOJ's far-reaching crackdown on insider trading. The Second Circuit characterized the "doctrinal novelty" of the government's recent insider trading prosecutions, which the court observed were "increasingly targeted at remote tippees many levels removed from corporate insiders."⁶²

The Second Circuit's decision in *Newman* implicated both parts of *Dirks*' rule for tippee liability discussed in Section A above. First, with respect to the tippee's requisite knowledge, the *Newman* court held that it was not enough for the tippee to know only that the tipper had breached their duty to maintain the information in confidence; instead, to be held criminally liable for insider trading, a tippee must have known that the tipper received a personal benefit for disclosing the confidential information.⁶³ The court explained that while it had not previously had occasion to address whether the tippee must know that the tipper received a personal benefit, almost all district courts in the circuit had answered that question in the affirmative, thus suggesting that it was merely sanctifying district court rulings on the issue,⁶⁴ which the court indicated were in sync with *Dirks*.⁶⁵ In any event, requiring the government to show that the tippee knew that the tipper received a personal benefit in exchange for disclosing the confidential information created a significant hurdle for the government in prosecuting remote tippees who are many steps removed from the tipper.

The Second Circuit's treatment of the aspect of *Dirks*' rule concerning the tipper's personal benefit was more controversial and was also the

⁶⁰ *Id.* at 444-45.

⁶¹ *See id.* at 452-55.

⁶² *Id.* at 448. With respect to the two managers in the case specifically, the *Newman* court went out of its way to observe that the government had not cited a single case in which tippees so removed from the corporate insider who disclosed the confidential information had been found criminally liable for insider trading. *Id.*

⁶³ *Id.* at 449 ("[W]e conclude that a tippee's knowledge of the insider's breach necessarily requires knowledge that the insider disclosed confidential information in exchange for personal benefit.").

⁶⁴ *Id.* at 449-51.

⁶⁵ *See id.* at 447 (stating that imposing liability on a tippee only if the tippee had knowledge of the tipper's personal benefit "follows naturally from *Dirks*").

subject of the Supreme Court's later decision in *Salman*.⁶⁶ As discussed above in Section A, under *Dirks*' gift-gifting principle, if a tipper discloses confidential information to a trading relative or friend, then the disclosure gives rise to an inference that the tipper personally benefited from the disclosure and thus breached their fiduciary duty. *Newman* held that this inference "is impermissible in the absence of proof of a meaningfully close personal relationship that generates an exchange that is objective, consequential, and represents at least a potential gain of a pecuniary or similarly valuable nature."⁶⁷

As embodied by that articulation, *Newman* substantially narrowed *Dirks*' gift-giving principle in two ways: under a reasonable reading of that language in *Newman*, a gift of confidential information from the tipper to the tippee gives rise to an inference of personal benefit only if (i) the tipper and tippee had a "meaningfully close personal relationship," and (ii) the relationship generated an "exchange" that was "objective, consequential, and represent[ed] at least a potential gain of a pecuniary or similarly valuable nature."⁶⁸ Neither of these limitations to the gift-giving principle expressly appears in *Dirks*, which, as the Supreme Court would later explain in *Salman*, "makes clear that a tipper breaches a fiduciary duty by making a gift of confidential information to a 'trading relative'"⁶⁹ or friend. Previously, if the tipper had disclosed the confidential information to a trading relative or friend, the government could use that fact alone to establish the second part of *Dirks*' rule for tippee liability.⁷⁰ After *Newman*, however, that fact alone was not enough and the government would have to overcome the two additional limitations to the gift-giving principle announced in *Newman*, each of which made it harder for the government to establish tippee liability.⁷¹ As a decision by the Second Circuit, *Newman* was a landmark decision in insider trading law.⁷²

⁶⁶ *Salman v. United States*, 137 S. Ct. 420, 421-22 (2016); see *Newman*, 773 F.3d at 446.

⁶⁷ *Newman*, 773 F.3d at 452. Independent of the scope of the gift-giving principle, the court also held that while the personal benefit to the tipper is "broadly defined," it "must be of some consequence." *Id.* (quoting *United States v. Jiau*, 734 F.3d 147, 153 (2d Cir. 2013)).

⁶⁸ *Id.*

⁶⁹ *Salman*, 137 S. Ct. at 427.

⁷⁰ See *Dirks v. SEC*, 463 U.S. 646, 664 (1983).

⁷¹ See *Newman*, 773 F.3d at 442.

⁷² For a thorough discussion of the important role of the Second Circuit in the development of U.S. securities law and insider trading law in particular, see generally Karen Patton Seymour, *Securities and Financial Regulation in the Second Circuit*, 85 *FORDHAM L. REV.* 225 (2016).

D. *The Immediate Response to Newman and the Post-Newman Period*

The effect of *Newman* on pending insider trading cases was almost immediate. For example, before the issuance of *Newman*, four of the five defendants in *United States v. Conradt*⁷³ had pled guilty to insider trading. On December 11, 2014, the day after *Newman* was issued, the trial court in *Conradt* scheduled a status conference to determine whether *Newman* affected the four defendants' guilty pleas.⁷⁴ At the status conference, the court advised the parties that "it was skeptical that the pleas were sufficient in light of *Newman*'s clarification of the personal benefit and tippee knowledge requirements of tipping liability for insider trading" but "reserved decision . . . in light of the Government's request for an opportunity to submit briefing in support of their position that *Newman*'s analysis does not apply in insider-trading cases prosecuted under a misappropriation theory."⁷⁵ The court rejected the government's argument and vacated the four defendants' guilty pleas on January 22, 2015.⁷⁶ Days later, the DOJ submitted a letter brief in which it explained that "the Second Circuit [in *Newman*] substantially changed the law pertaining to insider trading" and that based in part "on the newly-announced standards set forth in *Newman*," the government would move for dismissal without prejudice of the charges against all of the defendants in the case.⁷⁷ Shortly thereafter, the court granted the government's motion to dismiss.⁷⁸

The government was clear in its position that *Newman* would hinder its prosecutorial efforts and would facilitate insider trading. In its

⁷³ No. 12 Cr. 887 (ALC), 2015 U.S. Dist. LEXIS 16263, at *2 (S.D.N.Y. Jan. 22, 2015) (vacating guilty plea).

⁷⁴ See Order Setting Status Conference, *United States v. Conradt*, 2015 U.S. Dist. LEXIS 16263 (S.D.N.Y. Jan. 22, 2015) (No. 12 Cr. 887 (ALC)).

⁷⁵ *Conradt*, 2015 U.S. Dist. LEXIS 16263, at *3.

⁷⁶ *Id.*

⁷⁷ See Letter Brief for Plaintiff, *Conradt*, 2015 U.S. Dist. LEXIS 16263, at *1-2 (No. 12 Cr. 887 (ALC)).

⁷⁸ See Entry of Nolle Prosequi, *Conradt*, 2015 U.S. Dist. LEXIS 16263 (No. 12 Cr. 887 (ALC)). Similarly, less than one week after the Second Circuit issued *Newman*, the SEC sought to dismiss an administrative action alleging unlawful insider trading based on tippee liability. Ed Beeson, *SEC Hits Limits in Collapsed Herbalife Case*, LAW360 (Dec. 19, 2014, 8:10 PM), <https://www.law360.com/articles/606128/sec-hits-limits-in-collapsed-herbalife-insider-case>. While the SEC attributed its decision on its inability to secure the testimony of two key witnesses, various legal commentators attributed the withdrawal to *Newman*. See, e.g., *id.*; see also Donna M. Nagy, *Beyond Dirks: Gratuitous Tipping and Insider Trading*, 42 J. CORP. L. 1, 5 (2016) ("[Since *Newman* a] host of other defendants, both within and outside the Second Circuit, have . . . sought to have their indictments or complaints dismissed, criminal convictions or civil liability determinations overturned, and guilty pleas or settlements vacated.").

petition for rehearing and rehearing en banc in *Newman*, filed in January 2015, the government stated that *Newman* “arguably represents one of the most significant developments in insider trading law in a generation.”⁷⁹ The government further explained that *Newman* “threatens to undermine enforcement efforts” and “invites selective leaking of valuable information to favored friends and associates of well-placed corporate insiders.”⁸⁰ On the heels of the decision, scholars noted that *Newman* “raises likely insurmountable burdens for prosecutors to pursue remote tippees.”⁸¹ Legal commentators similarly observed that *Newman* “has far-reaching implications for the government’s ability to bring large scale insider trading cases,” including potentially “widespread consequences for all tippee liability, even if the tippee is directly in contact with the tipper.”⁸² In the popular

⁷⁹ Petition of the United States for Rehearing and Rehearing En Banc at *22-23, *United States v. Newman*, 773 F.3d 438 (2d Cir. 2014) (No. 13-1837(L)) [hereinafter U.S. Rehearing Petition]. The Second Circuit denied the petition on April 3, 2015. *Newman*, 773 F.3d 438 (2d Cir. 2014), *reh’g denied* No. 13-1837(L), 2015 WL 1954058 (2d Cir. Apr. 3, 2015). The government petitioned the Supreme Court for certiorari, but the Court denied the petition on October 5, 2015. See Letter from Scott S. Harris, Clerk of the Court, Supreme Court of the United States, to Clerk, United States Court of Appeal for the Second Circuit (Oct. 5, 2015) [hereinafter Supreme Court Notice] (notifying the clerk of the Court of Appeals for the Second Circuit that the writ of certiorari for *Newman* had been denied).

⁸⁰ U.S. Rehearing Petition, *supra* note 79, at *23. The government also explained that *Newman* “provides a virtual roadmap for savvy hedge-fund managers and other traders to insulate themselves from tippee liability by knowingly placing themselves at the end of a chain of inside information and avoiding learning the details about the sources of obviously confidential and improperly disclosed information.” *Id.* at *24.

⁸¹ See, e.g., James Cox, *Giving Tipsters a Pass*: U.S. v. Newman, CLS BLUE SKY BLOG (Jan. 27, 2015), <http://clsbluesky.law.columbia.edu/2015/01/27/giving-tipsters-a-pass-u-s-v-newman-3/> (discussing a hypothetical case under both the former standards prior to *Newman* and the *Newman* standards). Cox also observed that “*Newman* causes even greater harm to the public interest in fair capital markets by making it impossible to pursue the true violator, the tipper.” *Id.*; see also Stephen Bainbridge, *U.S. v. Newman: A Big Win for Coherence and Fairness in Insider Trading Law*, PROFESSORBAINBRIDGE.COM (Dec. 11, 2014), <http://www.professorbainbridge.com/professorbainbridge.com/2014/12/us-v-newman-a-big-win-for-coherence-and-fairness-in-insider-trading-law.html> (“[*Newman*] finally put a judicial cap on [Bharara’s] quest to expand the definition of insider trading to capture virtually every information asymmetry . . .”).

⁸² HELEN V. CANTWELL ET AL., DEBEVOISE & PLIMPTON LLP, SECOND CIRCUIT RESTORES TEETH TO INSIDER TRADING PERSONAL BENEFIT REQUIREMENT 3 (2014), <https://www.debevoise.com/-/media/files/insights/publications/2014/12/20141211a-second-circuit-restores-teeth-to-insider-trading-personal-benefit-requirement.pdf>; see also *Insider Trading After United States v. Newman, the Second Circuit’s Landmark Decision Limiting Liability of Downstream Recipients of Insider Information*, QUINN EMANUEL URQUHART & SULLIVAN LLP, (Apr. 2015), <https://www.quinnemanuel.com/the-firm/publications/article-april-2015-insider-trading-after-united-states-v->

press, one observer stated, albeit metaphorically, that “the hedge fund community is celebrating” *Newman*.⁸³

Any such celebration was temporary. On July 6, 2015, about seven months after the Second Circuit issued *Newman*, the Ninth Circuit issued its decision in *United States v. Salman*.⁸⁴ As discussed below, the Ninth Circuit’s decision rejected one aspect of *Newman* and was subsequently affirmed by the Supreme Court.⁸⁵ In the period leading up to the Ninth Circuit’s decision, district courts also began rejecting arguments by defendants predicated on *Newman*’s claimed relevance to their cases.

Perhaps the most well-known of the district court cases preceding the Ninth Circuit’s *Salman* decision was an April 6, 2015 decision by Judge Rakoff, a leading authority on securities law who would author the Ninth Circuit’s *Salman* decision while sitting in designation. The case, *SEC v. Payton*, was a civil proceeding initiated by the SEC against two of the defendants in *Conradt*, discussed above.⁸⁶ In his decision denying the defendants’ motion to dismiss based on *Newman*, Judge Rakoff held that the SEC’s allegations concerning the defendants’ knowledge of the tipper’s personal benefit were sufficient to satisfy the lower civil standard of knowing or reckless, thus providing the SEC a basis to argue that *Newman*’s relevance is diminished in civil cases.⁸⁷ In the months leading up to the Ninth Circuit’s *Salman* decision, other district courts similarly rejected defendants’ *Newman*-based arguments.⁸⁸ The growing

newman-the-second-circuit-s-landmark-decision-limiting-liability-of-downstream-recipients-of-insider-information/ (“The Second Circuit recently dealt a major setback to federal prosecutors’ recent crackdown on insider trading . . . [and] . . . place[d] the most significant new limits on insider trading in decades.”).

⁸³ See Patrick Radden Keefe, *Making Insider Trading Legal*, *NEW YORKER* (Oct. 27, 2015), <https://www.newyorker.com/business/currency/making-insider-trading-legal>.

⁸⁴ 792 F.3d 1087 (9th Cir. 2015) (internal quotation removed), *aff’d*, 137 S. Ct. 420 (2016).

⁸⁵ *See id.* at 1093; *Salman v. United States*, 137 S. Ct. 420 (2016).

⁸⁶ *SEC v. Payton*, 97 F. Supp. 3d 558, 559-61 (S.D.N.Y. 2015).

⁸⁷ *See id.* at 563-65. Judge Rakoff also held that the court was able to draw an adverse inference from the allegations that the defendants consciously avoided gathering additional information about the source of the inside information and the nature of the initial disclosure. *See id.* at 564-65.

⁸⁸ *See, e.g.*, *SEC v. Sabrdaran*, No. 14-cv-04825-JSC, 2015 U.S. Dist. LEXIS 25051 (N.D. Cal. Mar. 2, 2015) (rejecting tipper’s motion to dismiss based on *Newman*’s requirement that the tippee had knowledge of the tipper’s personal benefit); *United States v. Riley*, 90 F. Supp. 3d 176 (S.D.N.Y. Mar. 3, 2015) (denying defendant’s motion for acquittal or a new trial based on *Newman*); *United States v. McPhail*, No. 14-10201-DJC, 2015 U.S. Dist. LEXIS 62096 (D. Mass. May 12, 2015), *aff’d*, *United States v. Parigian*, 824 F.3d 5 (2d Cir. 2016) (denying motion to dismiss based on *Newman* in a tipper-tippee misappropriation case); *SEC v. Jafar*, No. 13-CV-4645 (JPO), 2015 U.S.

uncertainty about the scope of *Newman* was reflected in commentary in the months preceding the Ninth Circuit's *Salman* decision, which advised hedge funds that *Newman* may not sweep as broadly as may have been initially perceived.⁸⁹

The Ninth Circuit's *Salman* decision generated a circuit split between the Ninth and Second Circuits. In *Salman*, the Ninth Circuit affirmed the conviction of a tippee who had repeatedly traded in advance of merger announcements.⁹⁰ The tipper in the case had relayed the confidential information about the upcoming mergers to his brother who in turn had relayed the information to the defendant.⁹¹ On appeal, the defendant urged the Ninth Circuit to adopt *Newman* and argued that, under *Newman*, the evidence was insufficient to find that the tipper disclosed the information to the tipper's brother in exchange for a personal benefit or that, if the tipper had received a personal benefit, the defendant did not know of that benefit.⁹²

The Ninth Circuit, through Judge Rakoff, rejected the defendant's argument. It held that *Dirks*' gift-giving principle governed the case: because the tipper relayed the information to a trading relative or friend — namely, his brother — under *Dirks*' gift-giving principle, the tipper is considered to have received a personal benefit from the disclosure.⁹³ The court also expressly rejected *Newman*, to the extent the Second Circuit had held in *Newman* that if the tipper disclosed the confidential information to a trading relative or friend, the government also must

Dist. LEXIS 74281 (S.D.N.Y. June 8, 2015) (holding that, despite *Newman*, the SEC in a civil case need not specifically allege the identity of the tipper or the nature of the tipper's personal benefit, if the SEC does not know the tipper's identity or how the tip was relayed to the defendant).

⁸⁹ See, e.g., Douglas A. Rappaport & Christina Prusak Chianese, *Payton Begins to Clarify Newman Aftermath*, HEDGE FUND JOURNAL (May 2015), <https://thehedgefundjournal.com/payton-begins-to-clarify-newman-aftermath/> [<https://perma.cc/6QUE-GQYU>] (“[*Payton*] underscores that, despite *Newman*, in cases with a sufficient evidentiary predicate, the government retains powerful tools, including civil enforcement, as means of policing tipper-tippee theories of insider trading liability.”); Marc R. Rosen, *Recent Cases Reduce the Impact of Newman on Insider Trading Enforcement*, HEDGE FUND L. REP., May 2015, at 6 (“The *Payton* decision has shed light on what [the defendants in *Payton*] now know: *Newman* was not the death knell of insider trading law but, rather, a very large bump in the road. . . . Given the recklessness and conscious avoidance standards, hedge fund managers, traders, and analysts will be hard-pressed to rely on *Newman* in conducting their business.”).

⁹⁰ See *United States v. Salman*, 792 F.3d 1087, 1094 (9th Cir. 2015).

⁹¹ *Id.* at 1088-89.

⁹² *Id.* at 1091.

⁹³ See *id.* at 1092.

prove that the tipper received a tangible benefit in exchange for the confidential information.⁹⁴

The Supreme Court granted the *Salman* defendant's petition for certiorari and issued its decision on December 6, 2016.⁹⁵ The Court affirmed the Ninth Circuit and, like the Ninth Circuit, held that *Dirks*' gift-giving principle resolved the case.⁹⁶ The Court also addressed the part of *Newman*'s holding relating to *Dirks*' gift-giving principle. The Court held that, "to the extent the Second Circuit held that the tipper must also receive something of a 'pecuniary or similarly valuable nature' in exchange for a gift to family or friends, . . . we agree with the Ninth Circuit that this requirement is inconsistent with *Dirks*."⁹⁷ The Court did not address the *Newman* court's holding that the tippee must have knowledge of the tipper's personal benefit⁹⁸ or its holding that *Dirks*' gift-giving principle applies only if the tipper and tippee had a meaningfully close personal relationship.

II. USING *NEWMAN* TO EMPIRICALLY ASSESS THE EFFECTS OF A CHANGE IN INSIDER TRADING LAW

In many ways, *Newman* offers an ideal mechanism for empirically evaluating whether a change in insider trading law affects insider trading. The law of tippee liability remained relatively unchanged in the period before *Newman* and in the period after *Newman*, at least until the Ninth Circuit's *Salman* decision or the earlier district court decisions discussed in Part I.D. An empirical analysis of how changes in insider trading law affect insider trading can therefore evaluate the amount of insider trading before and after *Newman*, subject to the necessary controls. This Article's empirical analysis is based on such a before and after analysis of insider trading.

This part of the Article discusses the specific empirical methodology used to evaluate *Newman*'s effect on insider trading. Section A discusses the focus of the empirical analysis — evaluation of insider trading in advance of mergers announced in a period before *Newman* and in a period after *Newman* — and construction of the dataset used in the

⁹⁴ *Id.* at 1093-94.

⁹⁵ *Salman v. United States*, 137 S. Ct. 420, 420 (2016).

⁹⁶ *See id.* at 427.

⁹⁷ *Id.* at 428.

⁹⁸ The Court expressly stated that the current case did not implicate this aspect of *Newman*. *Id.* at 425 n.1. In fact, the Court characterized the government's position as acknowledging that the government must prove the "tippee knew that the tipper disclosed the information for a personal benefit and that the tipper expected trading to ensue." *Id.* at 427.

analysis. Section B discusses the metric that the analysis uses to identify the extent of insider trading in advance of merger announcements — the run-up in the stock price of the merger target in advance of the merger’s public announcement — and Section C discusses calculation of the run-up. Section D discusses deal rumors and other control variables used in the empirical analysis.

A. *Focus of Analysis: Merger Announcements*

The Article’s empirical analysis focuses on insider trading in advance of merger announcements occurring in a period before and after *Newman*. As an initial matter of terminology, the term “mergers” is used throughout the Article as shorthand for the larger class of business transactions that involve the combination of companies or a company or person acquiring all of the shares of another company such as through a tender offer.

The analysis focuses on merger announcements for a variety of reasons. First, because a merger announcement ordinarily will cause the target’s share price to immediately increase and tend towards the higher price being offered by the acquiring entity,⁹⁹ a merger announcement offers an especially fruitful opportunity for insider trading. A trader who has confidential information about an upcoming merger can capitalize on some of these gains by trading in advance of the merger’s public announcement, such as through a simple strategy of acquiring shares in the target company at the lower, pre-announcement levels and then selling those shares at the higher, post-announcement levels or through more complex trading strategies.¹⁰⁰

The analysis also focuses on merger announcements because they are widely recognized generators of insider trading, perhaps pervasively so. In a recent empirical study, for instance, researchers evaluated a dataset comprised of all merger announcements occurring in the United States between January 1, 1996 and December 31, 2012.¹⁰¹ By using abnormal

⁹⁹ See, e.g., Mark Mitchell, Todd Pulvino & Erik Stafford, *Price Pressure Around Mergers*, 59 J. FIN. 31, 35 (2004) (“As a result of a merger announcement, the future return distribution of the target firm is dramatically altered, as the target’s firm trades at a small discount to the consideration offered by the acquiring company.”).

¹⁰⁰ See generally Patrick Augustin, Menachem Brenner & Marti G. Subrahmanyam, *Informed Options Trading Prior to Takeover Announcements: Insider Trading?* (Oct. 27, 2015) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2441606; Jason M. Breslow, *Study: Corporate Mergers Overrun by Insider Trading*, PBS FRONTLINE (June 17, 2014), <https://www.pbs.org/wgbh/frontline/article/study-corporate-mergers-overrun-by-insider-trading/>.

¹⁰¹ See Augustin et al., *supra* note 100.

trading volume in equity options written on target firms in advance of merger announcements as their measure of informed trading, the researchers found that nearly 25% of the mergers in their sample had abnormal options volume that were statistically significant at the 5% level.¹⁰² Many well-known insider trading prosecutions and insider trading cases also have involved mergers. Merger-related insider trading for instance served as the basis of the offense in *Salman*.

In order to assess the effects of *Newman* on insider trading, the analysis evaluates mergers announced in a period before the Second Circuit issued *Newman* on December 10, 2014 and a period after *Newman*. For the post-*Newman* analysis below, the Article uses the time period from December 11, 2014 through the Ninth Circuit's issuance of *Salman* on July 6, 2015. As discussed below, *Salman* serves as a natural bookend with which to evaluate *Newman*'s effect on insider trading. In order to also assess how the Ninth Circuit's *Salman* decision may have affected insider trading, such as whether it ameliorated the amount of insider trading, the data collection was extended further so that it also encompassed mergers announced 90 days after *Salman*. This specification generated a 298-day window after *Newman* spanning December 11, 2014 (the day after *Newman*) to October 4, 2015 (90 days after the Ninth Circuit's *Salman* decision). This period also includes the district court decisions discussed above that preceded the Ninth Circuit's *Salman* decision, such as *Payton*, but does not include the Supreme Court's denial of certiorari in *Newman*, which occurred on October 5, 2015.¹⁰³

For purposes of collecting data in the period before *Newman*, the relevant time period was set to have the same length as the after-*Newman* period. This resulted in a 298-day period spanning February 16, 2014 (298 days before *Newman*) to December 10, 2014 (the day *Newman* was issued).

This specification ultimately generated a data collection period of February 16, 2014 to October 4, 2015. Merger data were obtained from SDC Platinum.¹⁰⁴ The data collection extracted all events on SDC

¹⁰² See *id.* at 1. Fifteen percent of the cases in the sample also had abnormal options trading volume that was statistically significant at the 1% level. See *id.* at 11 n.6.

¹⁰³ See Supreme Court Notice, *supra* note 79; Brent Kendall & Christopher M. Matthews, *Limits on Insider-Trading Prosecutions to Remain*, WALL ST. J. (Oct. 5, 2015, 7:31 PM), <https://www.wsj.com/articles/supreme-court-denies-doj-appeal-on-insider-trading-prosecutions-1444053439>.

¹⁰⁴ SDC Platinum is a financial transaction database that contains, among other things, historical data on M&A transactions. See *SDC Platinum*, REFINITIV, <https://www.refinitiv.com/en/products/sdc-platinum-financial-securities/> (last visited Oct. 30, 2019) [<https://perma.cc/H84V-FNPW>].

Platinum identified as involving a business combination or the acquisition of 100% of a company's stock that were announced¹⁰⁵ between February 16, 2014 and October 4, 2015 and limited to targets involving U.S. public companies.¹⁰⁶ The analysis was not limited to just completed mergers. Non-consummated mergers were included in the analysis because they are no different than completed mergers with respect to insider trading opportunities at the announcement: a merger announcement will generate significant stock price gains in the target, and thus generate insider trading opportunities, whether or not the parties ultimately abandon the merger.

B. *The Run-Up as a Measure of Insider Trading*

Because insider trading activity generally cannot be directly observed, empirical studies of insider trading usually use indirect measures that reflect the extent of insider trading. For example, scholars have conducted empirical analysis of insider trading using abnormal trading volume in the stock of the target company¹⁰⁷ or options written on it,¹⁰⁸

¹⁰⁵ If a merger was announced after the markets had closed for the day or on a weekend or trading holiday, it was considered to have been announced the next trading day for purposes of data gathering and subsequent empirical analysis, including the event studies discussed below. The specific mergers announced during market close, and which therefore required an announcement date adjustment, were identified through review of press releases and news stories announcing the mergers.

¹⁰⁶ The universe of deals extracted from SDC Platinum are the events in the "Domestic Mergers, 1979-Present" database with a "Form of the Deal" code equal to "M" or "AR" limited to the relevant period and involving U.S. public company targets. See *Definitions - Mergers & Acquisitions*, THOMSON REUTERS, <http://mergers.thomsonib.com/td/DealSearch/help/def.htm> (last visited Oct. 30, 2019) [<https://perma.cc/6WUE-5A3L>]. A few of the extracted events were instances of a target publicly confirming a prior but non-consummated merger attempt. These events were not included in the analysis. The extracted events also included debt restructuring transactions, which were excluded from the analysis. Finally, the extracted events included announcements of a subsequent merger attempt directed at a target that was subject to an earlier or ongoing merger attempt. Because the run-up associated with a subsequent merger announcement may be confounded by the effects of the earlier merger announcement, these subsequent merger announcements were excluded from the analysis.

¹⁰⁷ See Gregg A. Jarrell & Annette B. Poulsen, *Stock Trading Before the Announcement of Tender Offers: Insider Trading or Market Anticipation?*, 5 J. L. ECON. & ORG. 225, 242-43 (1989) (supplementing run-up analysis with stock trading volume analysis); Arthur J. Keown & John M. Pinkerton, *Merger Announcements and Insider Trading Activity: An Empirical Investigation*, 36 J. FIN. 855, 863-66 (1981) (same).

¹⁰⁸ See, e.g., Augustin et al., *supra* note 100 (analyzing the pervasiveness of informed options trading around merger announcements).

or the volatility of the target's stock price.¹⁰⁹ Some empirical insider trading studies focus on the trading activity of corporate insiders who have a duty to report and conduct their analysis using the volume, profitability, and timing of trades conducted by those corporate insiders.¹¹⁰

Another commonly used measure of insider trading, and the measure this Article uses to conduct its empirical analysis of *Newman*, is the run-up in the stock price of a firm before an event generating insider trading, such as a merger announcement, an earnings surprise, or the results of clinical drug trials. In the merger context, run-ups are linked to insider trading in the sense that insider trading preceding a merger announcement will generate upward pricing pressure, and therefore abnormal returns, in the target's stock price. For that reason, abnormal stock returns in a merger target in advance of a merger announcement serve as indicators of insider trading.¹¹¹ These abnormal returns certainly may be the result of other factors, such as rumors of the deal in the business or other press, as discussed below in Section C. In addition, insignificant insider trading may not be reflected in the run-up. But, all else equal, a greater run-up in the target's stock price can be considered indicative of a greater degree of insider trading.¹¹²

A number of empirical studies in financial economics and legal scholarship have used the run-up in the target's stock price as a measure of insider trading in the target in advance of the merger. One of the earliest contributions is a study by Keown and Pinkerton, who used the

¹⁰⁹ See, e.g., Laura Nyantung Beny & H. Nejat Seyhun, *Has Insider Trading Become More Rampant in the United States? Evidence from Takeovers*, in RESEARCH HANDBOOK ON INSIDER TRADING (Stephen Bainbridge ed., 2013) (evaluating the stock price volatility of tender offer targets to evaluate the profitability of insider trading).

¹¹⁰ See, e.g., Jeffrey F. Jaffe, *The Effect of Regulation Changes on Insider Trading*, 5 BELL J. ECON. & MGMT. SCI. 93 (1974) (analysis based on the volume and profitability of corporate insiders' trading); H. Nejat Seyhun, *The Effectiveness of the Insider-Trading Sanctions*, 35 J. L. & ECON. 149 (1992) (same); see also Jon A. Garfinkel, *New Evidence on the Effects of Federal Regulations on Insider Trading: The Insider Trading and Securities Fraud Enforcement Act*, 3 J. CORP. FIN. 89 (1997) (analysis based on the timing of insiders' trades); Jose M. Marin & Jacques P. Oliver, *The Dog That Did not Bark: Insider Trading and Crashes*, 63 J. FIN. 2429 (2008) (same).

¹¹¹ See Zhenyang Tang & Xiaowei Xu, *What Causes the Target Stock Price Run-Up Prior to M&A Announcements?*, 16 J. ACCT. & FIN. 106, 115-19 (2016).

¹¹² An alternate articulation is that the run-up reflects the amount of informed trading, which encompasses both lawful trading based on non-insider information not yet incorporated into the company's stock price and unlawful insider trading based on material, non-public information. See Merritt B. Fox, Lawrence R. Glosten & Gabriel V. Rauterberg, *The New Stock Market: Sense and Nonsense*, 65 DUKE L.J. 191, 217 (2015) (discussing insider information, announcement information, and fundamental value information as the primary sources of informed trading).

run-up to assess potential insider trading in approximately two hundred mergers between 1975 and 1978.¹¹³ Keown and Pinkerton found substantial run-up in the stock prices of the targets in their sample and based on that evidence concluded that trading on nonpublic information in advance of merger announcements abounds.¹¹⁴ Other scholars similarly have used target firm run-ups to analyze the extent of insider trading in advance of mergers.¹¹⁵ Scholars also have used stock price run-ups to analyze the extent of insider trading in advance of other events known to generate insider trading, such as earnings announcements¹¹⁶ and dividend announcements.¹¹⁷ Various scholars have concluded that the run-up reflects inside information,¹¹⁸ though some scholars have disputed that proposition.¹¹⁹

Empirical studies utilizing documented instances of insider trading have demonstrated a connection between insider trading and the run-up. Perhaps the two most well-known studies are those by Meulbroek¹²⁰ and by Cornell and Sirri.¹²¹ Meulbroek identified instances of insider

¹¹³ See Keown & Pinkerton, *supra* note 107, at 855.

¹¹⁴ See *id.* at 866.

¹¹⁵ See, e.g., Beny & Seyhun, *supra* note 109, at 29-31; Arturo Bris, *Do Insider Trading Laws Work?*, 11 EUR. FIN. MGMT. 267, 281-84 (2005); Inga Chira & Jeff Madura, *Impact of the Galleon Case on Informed Trading Before Merger Announcements*, 36 J. FIN. RES. 325, 329 (2012); Diane Del Guercio, Elizabeth R. Odders-White & Mark J. Ready, *The Deterrent Effect of the Securities and Exchange Commission's Enforcement Intensity on Illegal Insider Trading: Evidence for Run-Up Before News Events*, 60 J.L. & ECON. 269, 291 (2017) [hereinafter *The Deterrent Effect*].

¹¹⁶ See, e.g., David M. Reeb, Yuzhao Zhang & Wanli Zhao, *Insider Trading in Supervised Industries*, 57 J.L. & ECON. 529, 539-41 (2014).

¹¹⁷ See, e.g., Joseph K. Tanimura & Eric W. Wehrly, *The Effects of Insider Trading Restrictions: Evidence from Historical Dividend Initiations and Omissions*, 35 J. FIN. RES. 1, 17-19 (2012).

¹¹⁸ See, e.g., Stephen O'Brien & John F. Stewart, *Insider Trading and Mergers: The Effect of Illegal Trading Upon Target Firms' Pre-Announcement Price Activity* (Harv. Program in Law & Econ., Discussion Paper No. 68, 1990), http://www.law.harvard.edu/programs/olin_center/papers/pdf/OBrien_68.pdf [<https://perma.cc/RB9F-7WD4>] (evaluating the run-up in target stock price in advance of mergers between 1980 and 1987 and determining that at least 38% percent of the pre-announcement run-up is the result of insider trading); Tang & Xu, *supra* note 111, at 106 (analyzing the target stock price run-up prior to 10,202 merger announcements between 1981 and 2011 and concluding that the run-up is caused by unreported insider trading).

¹¹⁹ See, e.g., Jarrell & Poulsen, *supra* note 107, at 244 (evaluating run-ups of 172 tender offers between 1981 and 1985 and concluding that the run-up is consistent with little or no insider trading).

¹²⁰ Lisa K. Meulbroek, *An Empirical Analysis of Illegal Insider Trading*, 47 J. FIN. 1661 (1992).

¹²¹ Bradford Cornell & Erik R. Sirri, *The Reaction of Investors and Stock Prices to Insider Trading*, 47 J. FIN. 1031 (1992).

trading detected by the SEC and subsequently relied on in a civil case or administrative proceeding. She used those identified instances of insider trading to analyze whether they generated run-ups in the stock prices of the companies subject to the insider trading.¹²² Meulbroek found that on the days when companies in her sample were subject to insider trading, those companies' average abnormal return was approximately 3%.¹²³ Meulbroek also found that about 43% of the run-up in stock prices in advance of a merger of the firms in her sample occurred on the days on which the SEC detected insider trading.¹²⁴ Based on this analysis, Meulbroek concluded that insider trading is an important contributor to the pre-announcement run-up in the target's stock price.¹²⁵

Cornell and Sirri focused on insider trading in connection with one specific merger to determine whether insider trading in advance of a merger's public announcement affected the target's stock price.¹²⁶ Cornell and Sirri analyzed Anheuser-Busch's acquisition of Campbell Taggart, which was the subject of criminal prosecution and civil insider trading litigation, and which resulted in a set of identified insider trades in advance of the acquisition that formed the basis of the litigation. Cornell and Sirri found that the identified insider trades had a statistically significant effect on Campbell Taggart's stock price.¹²⁷ Cornell and Sirri also found that, in the days leading up to Campbell Taggart's acquisition, prices rose on average on days when insider trading was occurring and fell or remained constant on other days, relative to the market.¹²⁸ Other scholars analyzing instances of insider trading identified in connection with insider trading cases similarly

¹²² Meulbroek looks at SEC insider trading civil cases and administrative proceedings filed between 1980 and 1989. Meulbroek, *supra* note 120, at 1665. Meulbroek supplements the publicly available data with data from the SEC's nonpublic case files, which for the cases in Meulbroek's sample report the dates of the insider trading transactions underlying the complaint. *Id.* at 1665-66.

¹²³ *Id.* at 1675. Del Guercio Odders-White, and Ready conduct an analysis similar to Meulbroek's analysis, but for the later 2003-2011 time period, and find that on insider trading days, companies' abnormal returns were 0.5%-0.89%. See Del Guercio et al., *The Deterrent Effect*, *supra* note 115, at 288.

¹²⁴ Meulbroek, *supra* note 120, at 1691.

¹²⁵ *Id.*

¹²⁶ See Cornell & Sirri, *supra* note 121, at 1031-32.

¹²⁷ See *id.* at 1045-46.

¹²⁸ *Id.*

have found a relationship between insider trading and abnormal returns of the companies subject to insider trading.¹²⁹

C. Calculating the Run-Up

The run-up is calculated using formal event study methodology.¹³⁰ Intuitively, it is calculated by first determining how much the stock price of the target firm differed from its expected stock price, that is, the target's abnormal return, for each day within a specified run-up period. Then, each of those daily abnormal returns are added to generate an aggregate number. So, for example, if a merger was announced on July 25, 2014, and on July 24, 2014 the target's stock had abnormal returns of 0.2% and on July 23, 2014 had abnormal returns of 0.1%, the run-up over the July 23-July 24 period would have been 0.3%. In the language of event studies, the run-up is the cumulative abnormal return of the target's stock over some event window preceding public announcement of the merger.¹³¹

Calculation of a run-up requires specifying the run-up period, also called the event window, which is the period starting a specified date before the merger's public announcement and ending the day before that announcement. The target's abnormal returns are aggregated over this event window to calculate the run-up. The bulk of the analysis that follows uses a thirty-day run-up, wherein the period starts thirty days

¹²⁹ See, e.g., Raymond P.H. Fishe & Michel A. Robe, *The Impact of Illegal Insider Trading in Dealer and Specialist Markets: Evidence from a Natural Experiment*, 71 J. FIN. ECON. 461, 473-75 (2004) (analyzing insider trades and finding, among other things, that the identified insider trading was associated with abnormal returns of the subject companies). *But see* Sugato Chakravarty & John J. McConnell, *Does Insider Trading Really Move Stock Prices?*, 34 J. FIN. & QUANTITATIVE ANALYSIS 191, 208 (1999) (evaluating the trading activity of insider trading in Carnation's stock in advance of its acquisition by Nestle and finding an undistinguishable price effect of those insider trades and non-insider trades).

¹³⁰ Event studies originated in financial economics and are commonly used in corporate and securities law research. For early contributions to legal scholarship discussing event study methodology and its application to issues in corporate law, see Sanjai Bhagat & Roberta Romano, *Event Studies and the Law — Part I: Technique and Corporate Litigation*, 4 AM. L. & ECON. REV. 141 (2002); Sanjai Bhagat & Roberta Romano, *Event Studies and the Law — Part II: Empirical Studies of Corporate Law*, 4 AM. L. & ECON. REV. 380 (2002). Event studies are also used extensively in securities fraud litigation. See, e.g., Jill E. Fisch, Jonah B. Gelbach & Jonathan Klick, *The Logic and Limits of Event Studies in Securities Fraud Litigation*, 96 TEX. L. REV. 553, 558-69 (2018) (discussing the use and limitations of event studies in securities fraud litigation).

¹³¹ See G. William Schwert, *Markup Pricing in Mergers and Acquisitions*, 41 J. FIN. ECON. 153, 156 (1996).

before the public announcement of the merger¹³² and ends the day before the merger's public announcement.¹³³ Some of the robustness checks use shorter and longer run-up lengths: a ten-day run-up, a twenty-day run-up, a forty-day run-up, and a fifty-day run-up. These run-ups have analogous interpretations to the thirty-day run-up period.¹³⁴

Targets' run-ups (i.e., their cumulative abnormal return over the thirty-day and other event windows) were calculated through event studies conducted via Eventus on Wharton Research Data Services ("WRDS").¹³⁵ Because stock prices were drawn from the Center for Research in Security Prices ("CRSP"), targets lacking CRSP stock data for the entire estimation period were excluded from the analysis. The resulting dataset contained 328 merger announcements.

The sample includes merger announcements with extreme run-ups. For instance, while the average run-up for all other events in the sample is 3.50%, the period after *Newman* but before the Ninth Circuit issued *Salman* includes an announced merger having a staggering run-up of 223%. The bulk of this run-up is attributed to the target's stock price skyrocketing by over 230% a few days before the merger was announced. In order to not have this and other outlier transactions with extreme run-ups drive the empirical results, merger announcements with run-ups greater than 50% or less than -50% were excluded from the analysis. There are five outlier mergers satisfying this criterion in the sample and they all occur after *Newman*. Four of the outliers are in the period between *Newman* and the Ninth Circuit's *Salman* decision¹³⁶ and one outlier is in the period after the Ninth Circuit's decision.¹³⁷ The

¹³² The length of the run-up period varies in the literature but generally is between twenty and sixty days. See, e.g., Jarrell & Poulsen, *supra* note 107, at 232 (twenty-day run-up period); Keown & Pinkerton, *supra* note 107, at 859 (sixty-day run-up period); Schwert, *supra* note 131, at 172 (forty-two day run-up period).

¹³³ So, for instance, if a merger was announced on July 25, 2014 and on July 24, 2014 the target's stock had abnormal returns of 0.2%, and had abnormal returns of 0.1% on July 23, 2014 and on all other days thirty days prior to the merger announcement, the run-up over the thirty-day period would have been $0.002+29*0.001=3.1\%$.

¹³⁴ For example, the ten-day run-up is the sum of all of the target's abnormal returns occurring within the period starting ten days before the merger was announced and ending the day before the announcement. In the example in the previous footnote, the ten-day run-up would have been $0.002+9*0.001=1.1\%$.

¹³⁵ The estimations used a market model with a CRSP value weighted portfolio and an estimation length of 200 days starting sixty days prior to the merger announcement.

¹³⁶ The average run-up of these four outliers is 61.15%.

¹³⁷ The run-up of this outlier is -64.02%.

empirical results below separately provide the empirical findings with these outliers incorporated back into the analysis.

The exclusion of these five events generates a sample size of 323. Table 1 shows the distribution of these 323 merger announcements across the relevant date ranges.

Table 1. Sample Size and Distribution of Merger Announcements Across Date Ranges

Before <i>Newman</i> ¹³⁸	Between <i>Newman</i> and <i>Salman</i> (Ninth) ¹³⁹	After <i>Salman</i> (Ninth) ¹⁴⁰
152	119	52

Note: Table 1 shows the 323 merger announcements, as distributed across the period before *Newman*, the period between *Newman* and the Ninth Circuit's *Salman* decision, and the ninety-day period after *Salman*. The table excludes the outlier events discussed in this Section.

D. Rumors and Other Variables

The Article's empirical methodology statistically evaluates run-ups of the targets of mergers announced during a period before *Newman* with run-ups of targets of mergers announced during a period after *Newman*.¹⁴¹ While a target's run-up reflects the extent of insider trading, other factors may also influence the run-up.

Chief among these other factors is whether the merger was the subject of a rumor. Merger rumors are not uncommon and may originate with an insider or another person familiar with the deal relaying the information to the press, which then reports on it.¹⁴² An example of a rumored merger in the pre-*Newman* period in the sample is Zillow's

¹³⁸ Defined as the period from February 16, 2014 through December 10, 2014.

¹³⁹ Defined as the period from December 11, 2014 through July 6, 2015.

¹⁴⁰ Defined as the period from July 7, 2015 through October, 4, 2015.

¹⁴¹ For other papers using a similar methodology to analyze issues relating to insider trading, see, e.g., Beny & Seyhun, *supra* note 109, at 224-26 (using cumulative abnormal return across various time periods to assess the relationship between insider trading enforcement and insider trading); Chira & Madura, *supra* note 115, at 331 (evaluating the effects of the commencement of the *Galleon* cases on insider trading by evaluating average cumulative abnormal return before and after *Galleon*); Reeb et al., *supra* note 116, at 539-41 (using cumulative abnormal return to evaluate whether firms under regulatory supervision are subject to greater insider trading).

¹⁴² See Steven Sosnick, *Rumor-Trade Mfakes [sic] a Comeback*, BARRON'S (Sept. 18, 2010), <https://www.barrons.com/articles/SB50001424052970204914704575489883212624778>.

acquisition of rival online real estate database Trulia. Citing people familiar with the deal, on Thursday, July 25, 2014, Bloomberg reported that Zillow was seeking to acquire Trulia.¹⁴³ The rumors generated extensive trading in Trulia's stock and caused Trulia's stock to experience a 32% gain on July 25, 2014, the date the rumor was reported.¹⁴⁴ The parties publicly announced the deal days later, on Monday, July 28, 2014, which caused Trulia's stock price to experience an additional, though smaller, 15% gain.¹⁴⁵

Instead of rumors about the specific deal, there may be rumors in advance of a merger announcement that the target is seeking a buyer. For instance, on January 9, 2015, the press reported that the semiconductor company Silicon Image had retained an investment bank to explore a potential sale of the company.¹⁴⁶ That rumor caused Silicon Image's stock price to increase by approximately 11% on January 9, 2015, the day of the rumor.¹⁴⁷ A few weeks later, on January 27, 2015, Silicon Image announced that it would be acquired by Lattice Semiconductor, which caused Silicon Image's stock price to increase by more than 20%.¹⁴⁸

As reflected by these examples, and as shown in the literature,¹⁴⁹ merger rumors can generate significant increases in the share price of the rumored target company. Because rumored mergers are expected to have significantly higher run-ups than non-rumored mergers, and because it is possible that the fraction of rumored mergers before *Newman* is different than the fraction after *Newman*, the empirical analysis separately analyzes and controls for deals that are rumored and those that are not.

¹⁴³ See Joe Light & Dana Cimilluca, *Zillow in Advanced Talks to Buy Rival Trulia*, WALL ST. J. (July 24, 2014, 8:43 PM), <https://www.wsj.com/articles/zillow-in-advanced-talks-to-buy-rival-trulia-1406244769>.

¹⁴⁴ See *id.*

¹⁴⁵ See Michael J. De La Merced, *Zillow to Buy Trulia for \$3.5 Billion in All-Stock Deal*, N.Y. TIMES (July 28, 2014, 8:31 AM), <https://dealbook.nytimes.com/2014/07/28/zillow-to-buy-trulia-for-3-5-billion/?mcubz=1&r=0>.

¹⁴⁶ See Liana B. Baker & Soyoung Kim, *Exclusive: Chip Maker Silicon Image Explores Sale — Sources*, REUTERS (Jan. 9, 2015, 11:15 AM), <http://www.reuters.com/article/us-siliconimage-m-a-exclusive-idUSKBN0KI1ZY20150109>.

¹⁴⁷ See *id.*

¹⁴⁸ See *Technology Sector Update for 01/27/2015: LSCC, SIMG, IIVI, CRDS*, NASDAQ (Jan. 27, 2015, 1:32 AM), <http://www.nasdaq.com/article/technology-sector-update-for-01272015-lscsimgiivicrds-cm437135>.

¹⁴⁹ See, e.g., Jarrell & Poulsen, *supra* note 107, at 244; John Pound & Richard J. Zeckhauser, *Clearly Heard on the Street: The Effect of Takeover Rumors on Stock Prices*, 63 J. BUS. 291, 291-92 (1990).

Data on rumors was gathered by manually searching the news. For each merger in the sample, the “News” database on LexisAdvance was used to search for any news story appearing ninety days before the merger announcement where there is speculation or rumor about the deal, or a merger involving some other acquirer, or where the target is rumored to or itself confirms that it is looking to be acquired. If there is any such story, the merger was categorized as a rumored deal, while if there are no such stories, the merger was categorized as a non-rumored deal.

A ninety-day window was used to search for news, rather than a thirty-day window corresponding with the run-up period, because rumors occurring outside of the thirty-day period may still generate abnormal returns within the thirty-day period.

In addition to deal rumors, prior research has shown that tender offers may have a considerably higher run-up than other deal types.¹⁵⁰ Each merger therefore was coded for whether it was a tender offer based on SDC Platinum’s identification of the deal type.

The empirical methodology also coded for additional variables used in the empirical analysis. First, SDC Platinum was used to obtain the size of the target, as measured by the market capitalization of the target four weeks prior to the announcement. For the few missing values in the SDC Platinum database, the target’s market capitalization was manually computed using its stock price four weeks before the merger announcement. Second, SDC Platinum also was used to determine which of the acquirers in the sample were non-U.S. companies.

The analysis also determined whether acquirers in the sample filed a form 13D or 13G, or amendments thereto, with respect to the target company. These forms are mandated by SEC Rule 13d-1 whenever a person’s indirect or direct beneficial ownership in a company exceeds 5%.¹⁵¹ Notably, under that rule, once a person’s beneficial ownership in a company exceeds 5%, if the person’s acquisition was made for the purpose or effect of changing or influencing control of the issuer, then the person must file a form 13D disclosing its interest within ten days of acquiring it.¹⁵²

¹⁵⁰ See, e.g., Diane Del Guercio, Elizabeth R. Odders-White & Mark J. Ready, *The Deterrence Effect of Securities and Exchange Commission’s Enforcement Intensity on Illegal Insider Trading: Evidence for Run-up Before News Events*, 60 J.L. & ECON. 269 app. at 22 (2017), https://www.journals.uchicago.edu/doi/suppl/10.1086/693563/suppl_file/8827Appendix.pdf [hereinafter *Online Appendix*] (providing average twenty-day run-ups for various date ranges and showing that, for six of the seven date ranges provided, the average run-up for tender offers was higher than the average run-up for all deals).

¹⁵¹ 17 C.F.R. § 240.13d-1 (2019).

¹⁵² See *id.*

For each merger in the sample, WhaleWisdom was used to review all 13D and 13G filings made with respect to the target company to determine which acquirers, if any, made a 13D or 13G filing, or filed any 13D or 13G amendment, ninety days strictly before the merger announcement. Across the sample, only a single instance of an acquirer making a 13D or 13G filing with respect to the target in the ninety-day pre-announcement period was identified. As expected, there are many instances of acquirers making a 13D filing the day the merger is announced or shortly thereafter, but these filings are not counted in the analysis.

III. EMPIRICAL FINDINGS: THE EFFECTS OF *NEWMAN* ON INSIDER TRADING

The empirical analysis demonstrates that *Newman* had a dramatic effect on insider trading as measured by target run-ups. This primary empirical finding is detailed in Section A below. The remaining sections of this part provide the Article's other key empirical findings. Those other findings include results showing that the substantial difference in target run-ups before and after *Newman* persists after controlling for deal rumors and other variables. The findings also include results showing that *Newman* had an exceptionally pronounced effect on target run-ups in the period immediately after its issuance, which were mitigated to some extent in the period leading up to and after the Ninth Circuit's decision in *Salman*.

A. *Newman's Dramatic Effects on Insider Trading as Reflected by Higher Average Run-Ups*

The calculated run-ups of the targets in the sample form the basis of the empirical analysis. The baseline analysis compares run-ups of targets of mergers announced in a period before *Newman* to the run-ups of targets of mergers announced in a period after *Newman*. The Article refers to these two periods as the "pre-*Newman* period" and the "post-*Newman* period," respectively. The pre-*Newman* period consists of all mergers in the sample announced on or before the Second Circuit issued *Newman* on December 10, 2014. The post-*Newman* period, on the other hand, consists of all mergers in the sample announced after *Newman* but on or before the Ninth Circuit issued its decision in *Salman* on July 6, 2015.¹⁵³ *Salman* was selected as the ending point of the post-

¹⁵³ The pre- and post-*Newman* periods correspond, respectively, to the "Before *Newman*" and "Between *Newman* and *Salman* (Ninth)" periods in Table 1 *supra*.

Newman period because, like *Newman*, *Salman* reflects a clear shift in law. As discussed in Part I.D above, in *Salman*, the Ninth Circuit refused to adopt a part of *Newman*'s significant narrowing of *Dirks*' gift-giving principle. The Ninth Circuit's decision generated a circuit split with the Second Circuit on the scope of tippee liability, which subsequently resulted in the Supreme Court's *Salman* decision.¹⁵⁴

To conduct the core analysis, the average run-up in the pre-*Newman* period and the average run-up in the post-*Newman* period were calculated and statistically evaluated. Table 2 provides these two averages and shows the primary finding that *Newman* increased the amount of insider trading, as reflected by target run-ups. As reflected in Table 2, while the average run-up in the pre-*Newman* period was 2.04%,¹⁵⁵ the average run-up in the post-*Newman* period was 6.35%,¹⁵⁶ which was more than three times higher than the pre-*Newman* average run-up ($6.35/2.04=3.11$).

Table 2. Pre- and Post-*Newman* Average Run-Ups

	Pre- <i>Newman</i>	Post- <i>Newman</i>	Post-Pre ¹⁵⁷
Average Run-Up	2.04%** (0.009)	6.35%*** (0.012)	4.31%*** (0.015)
	[0.23%, 3.85%]	[4.00%, 8.71%]	[1.36%, 7.27%]

Note: Table 2 shows the average run-up for the pre- and post-*Newman* periods and the percentage point difference between the two averages. Standard errors are in parentheses. Ninety-five percent confidence intervals are located below standard errors. Significance is denoted as ***=significant at 1%, **=significant at 5%, and *=significant at 10%. Denoted significance levels are for t-tests that the mean is zero (columns 1 and 2) and that the two means are identical (column 3). The table excludes the outlier events discussed in Part II.C.

The 4.31 percentage point difference between the pre-*Newman* average run-up and the post-*Newman* average run-up is significant at the 1% level.¹⁵⁸ Furthermore, even though the post-*Newman* average run-up is significantly higher than the pre-*Newman* run-up, there is no

¹⁵⁴ See *supra* Part I.D.

¹⁵⁵ Significant at the 5% level. See *infra* Table 2.

¹⁵⁶ Significant at the 1% level. See *infra* Table 2.

¹⁵⁷ Represented as a percentage point difference between post- and pre-*Newman* averages.

¹⁵⁸ In addition, as reflected in Table 2 *supra*, the upper bound of the ninety-five percent confidence interval for the pre-*Newman* average run-up is less than the lower bound of the ninety-five percent confidence interval for the post-*Newman* average run-up.

statistically significant linear trend in the run-up over the pre-*Newman* period.¹⁵⁹

Finally, because the four outlier events occurring within the pre- or post-*Newman* period generate an extremely high average run-up in the post-*Newman* period,¹⁶⁰ incorporating them into the analysis considerably magnifies the difference between the post-*Newman* average run-up and the pre-*Newman* average run-up. While the pre-*Newman* average run-up remains the same, the inclusion of the four outlier events causes the post-*Newman* average run-up to increase to 8.14%, which is almost four times higher than the pre-*Newman* run-up, thus suggesting an even greater effect of *Newman* on insider trading as measured by target run-ups.¹⁶¹

The statistically significant difference in the average run-up in the pre- and post-*Newman* periods extends to run-ups of durations other than thirty days. Table 3 below provides data similar to Table 2, but for run-up periods of ten, twenty, forty, and fifty days. For each of these other run-up periods, the average run-up during the post-*Newman* period is higher than the average run-up during the pre-*Newman* period and in all cases the difference is statistically significant.

Even for the relatively short ten-day run-up period, the post-*Newman* average run-up still remains almost three times higher than the pre-*Newman* average run-up ($3.74/1.28=2.92$). Additionally, while the post-*Newman* average run-up is statistically significant for each of the four other run-up periods in Table 3 at the 1% level, the pre-*Newman* average run-ups are not statistically significant for the forty- and fifty-day periods.

The run-up ratio is another measure used in empirical studies of insider trading.¹⁶² That measure provides further evidence of *Newman*'s

¹⁵⁹ Regressing target run-ups on a time trend in the pre-*Newman* period yields a coefficient on the time trend equal to 0.00006 with a standard error of 0.00012, resulting in a p-value of 0.641.

¹⁶⁰ As noted in *supra* note 136, the average run-up of the four outliers is 61.15%.

¹⁶¹ The 6.10 percentage point difference between the post-*Newman* run-up of 8.14% and the pre-*Newman* run-up of 2.04% is significant at the 5% level (p-value equal to 0.016).

¹⁶² See, e.g., Ajeyo Banerjee & E. Woodrow Eckard, *Why Regulate Insider Trading? Evidence from the First Great Merger Wave (1897-1903)*, 91 AM. ECON. REV. 1329, 1335-36 (2001) (referred to as the "runup index"); Del Guercio et al., *The Deterrent Effect*, *supra* note 115, at 292 (referred to as the "run-up ratio"); Jarrell & Poulsen, *supra* note 107, at 230, 233 (referred to as the "portfolio runup index"); Michael King, *Prebid Run-ups Ahead of Canadian Takeovers: How Big is the Problem?*, 38 FIN. MGMT. 699, 710, 712-13 (2009) (referred to as the "run-up index"); Tanimura & Wehrly, *supra* note 117, at 17-18 (referred to as the "runup index").

effect on insider trading. The run-up ratio scales the average run-up by the average deal premium to targets. For a given target, the deal premium is defined as a target's cumulative abnormal return occurring over the run-up period and over the additional period consisting of the date of the merger announcement and the day after the merger announcement.¹⁶³ The average deal premium is the average of all of the individual targets' deal premiums.

Table 3. Pre- and Post-Newman Average Run-Ups for Other Run-up Lengths

	Pre-Newman	Post-Newman	Post-Pre ¹⁶⁴
10-Day Average Run-Up	1.28%** (0.006)	3.74%*** (0.009)	2.46** (0.011)
20-Day Average Run-Up	1.70%** (0.008)	5.03%*** (0.011)	3.32** (0.013)
40-day Average Run-Up	1.52% (0.019)	6.65%*** (0.013)	5.13*** (0.017)
50-Day Average Run-Up	1.60% (0.016)	7.79%*** (0.015)	6.19*** (0.020)

Note: Table 3 shows the average run-up for the pre- and post-Newman periods and the percentage point difference in the two averages for run-up periods other than the baseline thirty-day period. Standard errors are in parentheses. Significance is denoted as ***=significant at 1%, **=significant at 5%, and *=significant at 10%. Denoted significance levels are for t-tests that the mean is zero (columns 1 and 2) and that the two means are identical (column 3). The table excludes the outlier events discussed in Part II.C.

The run-up ratio is the ratio of the average run-up to the average deal premium. That ratio measures the amount of the average deal premium to targets that occurred over the run-up period rather than the period when the merger was publicly announced and the day after to reflect

¹⁶³ In other words, a target's total premium is the cumulative abnormal return calculated over the period spanning thirty days before the merger announcement to the day after the merger announcement.

¹⁶⁴ Represented as a percentage point difference between the post- and pre-Newman averages.

any remaining price adjustment. All else equal, a higher run-up ratio reflects greater insider trading, because it means that relatively more of the average deal premium arose during the run-up period versus the period when the merger was or had been publicly announced, compared to a lower run-up ratio.

The run-up ratio and its two components are presented in Table 4 for both the pre- and post-*Newman* periods. The first row in Table 4 is the average run-up from Table 2. The second row is the average deal premium. The average deal premium for the pre-*Newman* period is 27.50%, meaning that on average a target firm had abnormal returns of 27.50% over the period spanning thirty days before the merger announcement and the day of and one day after the merger announcement. The post-*Newman* average deal premium is nearly identical to the pre-*Newman* average deal premium and there is no statistically significant difference between the two.¹⁶⁵

Table 4. Run-Up Ratios

	Pre- <i>Newman</i>	Post- <i>Newman</i>
Average Run-Up	2.04%	6.35%
Average Deal Premium	27.50%	27.20%
Run-Up Ratio	7.42%	23.35%

Note: The first row of Table 4 is taken from Table 2 and shows the average run-up, separately for the pre-*Newman* period and the post-*Newman* period. The second row shows the average deal premium, which is defined as the average of targets' cumulative returns over the run-up period and the additional period consisting of the day of the merger announcement and the day after the merger announcement. The third row is the run-up ratio, which is the ratio of the average run-up and the average deal premium in the preceding two rows. The table excludes the outlier events discussed in Part II.C.

The run-up ratio is provided in the third row of Table 4. As shown there, for the pre-*Newman* period, the run-up ratio is 7.42%, meaning that only about 7.5% of the average deal premium in the pre-*Newman* period was attributed to the run-up period. In contrast, for the post-*Newman* period, nearly one quarter of the average deal premium

¹⁶⁵ The p-value associated with a t-test of equal means is 0.934.

occurred during the run-up period. As with the average run-up, there was a considerable increase in the run-up ratio: in the post-*Newman* period, the percentage of the average deal premium occurring during the run-up period was also more than 3 times higher ($23.35/7.42=3.15$) than in the pre-*Newman* period.

B. Rumored Deals

Based just on comparisons of average target run-ups in the pre-*Newman* period and the post-*Newman* period, *Newman* had an effect on insider trading that was both statistically significant and economically meaningful. However, other factors may have appreciably influenced a target's run-up. By far the most important of these factors is whether the deal was the subject of rumors.¹⁶⁶ On average, a rumored deal will have a considerably higher run-up than a non-rumored deal.¹⁶⁷ A failure to control for deal rumors therefore could lead to an erroneous conclusion that *Newman* had an effect on insider trading when the data simply reflect the fact that deal rumors had a differential effect on run-ups in the pre-*Newman* period than on run-ups in the post-*Newman* period.

As discussed in Part II.D, news stories were reviewed to identify which of the merger announcements in the sample were associated with deal rumors. Of the 271 merger announcements in the pre- and post-*Newman* periods, fifty-seven, or 21%, were rumored deals, while the remaining 79% were non-rumored deals. As expected, rumored deals had a much higher average run-up than non-rumored deals. For rumored deals, the average run-up was 9.49%¹⁶⁸ while the average run-up for non-rumored deals was 2.45%.¹⁶⁹ The 7.04 percentage point difference between the two average run-ups is statistically significant at the 1% level.¹⁷⁰

Given the importance of rumors on the run-up, it is important to analyze the frequency of rumored deals in the post-*Newman* period relative to the pre-*Newman* period. As shown in Table 5 below, rumored deals are not equally distributed across the pre- and post-*Newman* periods. The percentage of rumored deals in the pre-*Newman* period is

¹⁶⁶ See, e.g., Jarrell & Poulsen, *supra* note 107, at 226.

¹⁶⁷ See *id.* at 240-41.

¹⁶⁸ Significant at the 1% level.

¹⁶⁹ Significant at the 1% level.

¹⁷⁰ Also as expected, a higher percentage of the total deal premium occurs during the day of the announcement and the day after for non-rumored deals than rumored deals. Specifically, the average cumulative abnormal return over the announcement day and the day after the announcement for non-rumored deals is 25.56% and for rumored deals is 15.43% (with a p-value associated with a t-test of equal means of 0.019).

approximately 16%, while in the post-*Newman* period the percentage of rumored deals is almost twice as high, approximately 28%. In light of this finding, it may be that the empirical finding from the previous Section that the average run-up in the post-*Newman* period is higher than the average run-up in the pre-*Newman* period merely reflects the fact that a greater fraction of the deals in the post-*Newman* period are rumored deals than in the pre-*Newman* period.

Table 5. Frequency of Non-Rumored and Rumored Deals

	Pre- <i>Newman</i>	Post- <i>Newman</i>
Non-Rumored	84.21% (n=128)	72.27% (n=86)
Rumored	15.79% (n=24)	27.73% (n=33)

Note: Table 5 shows the percentage of non-rumored deals and rumored deals in the pre-*Newman* period and the post-*Newman* period. Sample sizes are in parentheses. The table excludes the outlier events discussed in Part II.C.

Further analysis shows this not to be the case. The next Section uses regressions to control for the effect of deal rumors. Those regressions show that after controlling for deal rumors, *Newman* had a statistically significant effect on insider trading as measured by the run-up.

A different way to incorporate the effects of merger rumors into the analysis is to look at the effects of *Newman* separately for non-rumored mergers and rumored mergers. The first two columns of Table 6 below show the average run-up for the pre- and post-*Newman* periods, separately for non-rumored mergers and rumored mergers. While rumored deals were proportionally more prevalent in the post-*Newman* period than the pre-*Newman* period, Table 6 shows that the average run-up for both types of mergers was higher in the post-*Newman* period than the pre-*Newman* period. For non-rumored deals, the average run-up was more than two percentage points higher in the post-*Newman* period than the pre-*Newman* period. For rumored deals, the average run-up was more than six percentage points higher in the post-*Newman* period than the pre-*Newman* period. Each of those differences is statistically significant at the 10% level. Therefore, as measured by the run-up, mergers are associated with greater insider trading in the post-*Newman*

period than in the pre-*Newman* period, even after controlling for the incidence of merger rumors post-*Newman*.¹⁷¹

Table 6. Average Run-Ups For Rumored and Non-Rumored Deals

	Pre- <i>Newman</i>	Post- <i>Newman</i>	Post-Pre ¹⁷²
Non-Rumored	1.32% ¹⁷³ (0.009)	4.14%*** (0.013)	2.82* (0.016)
Rumored	5.89%** (0.028)	12.12%*** (0.024)	6.26* (0.037)

Note: Table 6 shows the average run-up for the pre- and post-*Newman* periods and the difference between the two, separately for non-rumored mergers and rumored mergers. Standard errors are in parentheses. Significance denoted as ***=significant at 1%, **=significant at 5%, and *=significant at 10%. Denoted significance levels are for t-tests that the mean is zero (columns 1 and 2) and that the means are identical (column 3). The table excludes the outlier events discussed in Part II.C.

Analyzing the run-up ratio discussed in the previous Section separately for non-rumored and rumored mergers provides additional evidence that *Newman* had an effect on both types of mergers. Figure 1 below depicts the pre- and post-*Newman* run-up ratios for non-rumored and rumored deals. The run-up ratio is higher in the post-*Newman* period than the pre-*Newman* period for both types of deals.¹⁷⁴

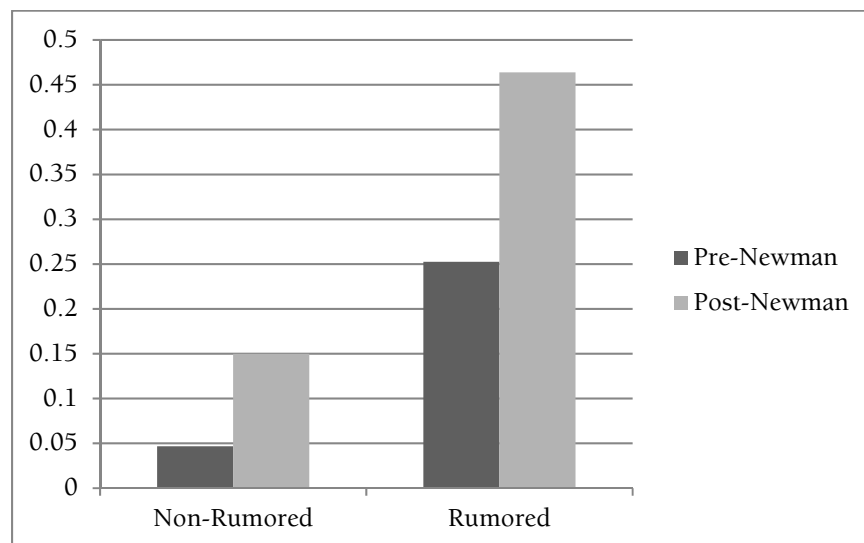
¹⁷¹ Of the four outlier events occurring in the pre- or post-*Newman* period, three were non-rumored deals and one was a rumored deal. Because the three outlier non-rumored deals each had an extremely positive run-up and occurred during the post-*Newman* period, incorporating them into the analysis causes the post-*Newman* run-up for non-rumored deals to increase from 4.14% to 7.78%. This 7.78% amount represents a nearly six-fold increase in average run-ups for non-rumored deals following *Newman* (7.78/1.32=5.89). The one rumored outlier deal had a substantially negative run-up (-93%) and occurred in the post-*Newman* period. Incorporating this rumored deal causes the post-*Newman* run-up to decrease to 9.05%. The 9.05% post-*Newman* average run-up for rumored deals is still considerably higher than the 5.89% pre-*Newman* average run-up for rumored deals, but because the inclusion of the outlier generates a relatively high dispersion of run-ups in the post-*Newman* period, the difference in the two lacks statistical significance at the 10% level (the p-value is 0.508).

¹⁷² Represented as a percentage point difference between the post- and pre-*Newman* averages.

¹⁷³ The p-value for the t-test is 16.35.

¹⁷⁴ For non-rumored deals, the pre-*Newman* run-up ratio is 4.67% and the post-*Newman* run-up ratio is 14.99%. For rumored deals, the pre-*Newman* run-up ratio is 25.26% and the post-*Newman* run-up ratio is 46.37%.

Figure 1. Pre- and Post-Newman Run-Up Ratios for Rumored and Non-Rumored Deals



Note: Figure 1 provides the run-up ratio for the pre-*Newman* period and the post-*Newman* period, separately for non-rumored mergers and rumored mergers. The figure excludes the outlier events discussed in Part II.C.

C. Regression Analysis

It is also possible that factors other than deal rumors have differential effects on run-ups in the pre-*Newman* period than in the post-*Newman* period. If so, the analysis should also control for those other factors. One method of doing so is to regress target run-ups on appreciable determinants of the run-up that may have differing effects in the pre-*Newman* period than in the post-*Newman* period.¹⁷⁵ This Section of the Article conducts that analysis.

While potentially less important than whether a deal was rumored, another factor that is known to have a meaningful effect on target run-up is whether the deal was a tender offer. As discussed, studies have shown that the run-up associated with a tender offer is on average

¹⁷⁵ Others have similarly used regressions to evaluate the effects of a policy change or some other factor on the extent of insider trading as measured by the run-up. See, e.g., Chira & Madura, *supra* note 115; Reeb et al., *supra* note 116, at 539-41.

higher than the run-up associated with other types of business combinations.¹⁷⁶

The data indicate that a slightly greater fraction of the deals in the post-*Newman* period were tender offers than in the pre-*Newman* period. In the pre-*Newman* period, 24 of the 152 deals, or about 15.79%, are tender offers. In the post-*Newman* period, 20 of the 119 deals, or about 16.81%, are tender offers. Some of the regressions that follow control for whether the deal was a tender offer and also include an interaction between the tender offer indicator and the post-*Newman* indicator. The inclusion of the interaction term allows an assessment of whether *Newman*'s effect on tender offers was different than its effect on other deal types.

Some regression specifications also include an additional set of variables that may also have a statistically significant effect on target run-ups.¹⁷⁷ In particular, because target size may influence the run-up, those additional controls include a variable for target size as measured by the natural log of the market capitalization of the target four weeks before the merger announcement. The additional controls also include a variable indicating whether the acquirer filed a Rule 13D or 13G form, or any amendment, ninety days before the merger was announced. The set of additional variables also includes a control for whether the acquirer was a non-U.S. company.

Finally, as discussed above in Section A, there is no statistically significant time trend in the pre-*Newman* period.¹⁷⁸ Nonetheless, to confirm that the results are not being driven by a temporal trend in the pre-*Newman* period, some of the regression specifications include a linear time trend.

Table 7 below provides the results of six different regression specifications. In addition to the post-*Newman* indicator variable, the first specification includes an indicator variable controlling for whether the merger was rumored. Though not surprising given the results in the last Section, the regression shows that even after controlling for deal rumors, *Newman* had a statistically significant effect on insider trading, as measured by target run-ups. The coefficient for deal rumors is positive, relatively high, and statistically significant, which is also to be expected given the results in the previous Section.

¹⁷⁶ See Del Guercio et al., *Online Appendix*, *supra* note 150, at 22 (for six of the seven date ranges provided, the average run-up for tender offers greater than the average run-up for all deals).

¹⁷⁷ See *supra* Part II.D for a discussion on data gathering and calculations concerning these other variables.

¹⁷⁸ See *supra* Part III.A.

Table 7. Regression Results

Independent Variable	Spec. 1	Spec. 2	Spec. 3	Spec. 4	Spec. 5	Spec. 6
Post- <i>Newman</i>	0.0355** (0.0148)	0.0318** (0.0156)	0.0313** (0.0157)	0.0600* (0.0312)	0.0589* (0.0309)	0.0552* (0.0312)
Constant	0.0103 (0.0093)	0.0057 (0.0096)	0.0192 (0.0264)	0.0262 (0.0201)	0.0223 (0.0203)	0.0318 (0.0304)
Rumor	0.0641*** (0.0200)	0.0652*** (0.0199)	0.0689*** (0.0220)	0.0634*** (0.0199)	0.0645*** (0.0198)	0.0677*** (0.0220)
Tender Offer		0.0280 (0.0283)	0.0297 (0.0284)		0.0307 (0.0285)	0.0321 (0.0285)
Tender Offer × Post- <i>Newman</i>		0.0196 (0.0443)	0.0289 (0.0453)		0.0164 (0.0440)	0.0257 (0.0451)
Other Variables Included ¹⁷⁹	N	N	Y	N	N	Y
Time Trend Included	N	N	N	Y	Y	Y
R sqr.	0.076	0.089	0.101	0.079	0.093	0.117

Note: Robust standard errors are in parentheses. Significance denoted as ***=significant at 1%, **=significant at 5%, and *=significant at 10%. The table excludes the outlier events discussed in Part II.C.

The second regression specification adds the tender offer and tender offer interaction term (noted respectively as “Tender Offer” and “Tender Offer × Post-*Newman*” in Table 7), while the third regression also adds the three controls discussed above. As shown in Table 7, the relationship between *Newman* and target run-ups persists after further controlling for those other variables — in each of those two other specifications, the coefficient on the post-*Newman* indicator variable is significant at the 5% level.¹⁸⁰

Across specifications 1 through 3, the average post-*Newman* run-up is 3.13 to 3.55 percentage points higher than the average pre-*Newman*

¹⁷⁹ Consists of the three additional controls discussed in the text: the natural log of the market capitalization of the target four weeks before the merger announcement; an indicator variable associated with the acquirer filing a Rule 13D or 13G form, or any amendment, ninety days before the merger announcement; and an indicator variable associated with the acquirer being a non-U.S. company.

¹⁸⁰ The p-values for the post-*Newman* indicator variable for specifications 1 through 3 in Table 7 *supra* are 0.017, 0.043, and 0.047, respectively.

run-up. In addition, the constant term, which measures the average run-up in the pre-*Newman* period conditional on the other included variables, is not statistically significant from zero at any conventional level of significance in any of the three specifications.¹⁸¹ That is not the case in any of the three specifications for the average run-up in the post-*Newman* period. These regression results further buttress the findings from the previous Sections that *Newman* increased insider trading as measured by target run-ups.

As also shown in Table 7, neither the coefficient on the tender offer indicator variable nor the coefficient on the interaction between the post-*Newman* indicator variable and the tender offer indicator is statistically significant in specification 2 or 3.¹⁸² The statistically insignificant coefficient on the tender offer interaction means that, as measured by target run-ups, *Newman*'s effect on insider trading was not statistically different for tender offers than other deal types.¹⁸³ The next part of the Article discusses this empirical finding.

Specifications 4 through 6 add a linear time trend to specifications 1 through 3. As expected, the post-*Newman* indicator continues to be positive and statistically significant with the linear trend added, though at a 10% significance level, rather than 5%.¹⁸⁴ The coefficient on the time trend is not significant in any of the three specifications.¹⁸⁵ An additional set of regressions similar to specifications 4 through 6 were conducted but with an additional interaction between the time trend and the post-*Newman* indicator.¹⁸⁶ In each of these regressions, the coefficient on the post-*Newman* indicator variable is positive and significant at the 1% level.

¹⁸¹ The p-values for the constant term for the specifications 1 through 3 in Table 7 *supra* are 0.268, 0.554, and 0.469, respectively.

¹⁸² Removal of the tender offer interaction term in specifications 2 and 3 in Table 7 *supra* results in a statistically significant and positive coefficient for the tender offer indicator. Without the tender offer interaction term, the coefficient on the tender offer indicator variable in specifications 2 and 3 is 0.0369 (p-value equal to 0.092) and 0.0424 (p-value equal to 0.059), respectively. The coefficient on the post-*Newman* indicator remains statistically significant with the removal of the tender offer interaction term (p-values equal to 0.018 and 0.016 in specifications 2 and 3, respectively).

¹⁸³ The p-value for the tender offer indicator variable is 0.658 in specification 2 and 0.524 in specification 3 in Table 7 *supra*.

¹⁸⁴ The p-values for the post-*Newman* indicator variable for specifications 4 through 6 in Table 7 *supra* are 0.055, 0.058, and 0.078, respectively.

¹⁸⁵ The p-values for the coefficient on the time trend in specifications 4 through 6 in Table 7 *supra* are 0.369, 0.325, and 0.389.

¹⁸⁶ While there is no statistically significant time trend in the pre-*Newman* period, see *supra* note 159, there is a downward trend in run-ups in the post-*Newman* period. See *infra* Part III.D.

An additional hypothesis that can be tested is whether rumors had a larger effect on run-ups post-*Newman*. For instance, it may be that after *Newman*, the market considered deal rumors more likely to be accurate, in which case rumored deals would have a greater effect on the run-up after *Newman*, all else equal. The statistical tests do not support this hypothesis. Regressions similar to the six specifications in Table 7 were conducted but with an additional interaction between the rumor indicator variable and the post-*Newman* indicator variable. The coefficient on the rumor interaction term was not statistically significant in any of the specifications.¹⁸⁷

Finally, the six regressions reflected in Table 7 were rerun but after adding back the excluded four outlier events in the relevant period. Because those observations increase the observed average run-up in the post-*Newman* period, adding them to the regressions generally increases the estimated effect of *Newman* on insider trading as measured by the run-up,¹⁸⁸ though the outliers cause the relevant coefficients to be imprecisely estimated and lose statistical significance in some specifications.¹⁸⁹

D. *The Pronounced Then Dampened Effects of Newman*

This Section examines the short- and long-term effects of *Newman* on insider trading. It shows that, as measured by the run-up, *Newman* had an especially pronounced effect on insider trading in the period just

¹⁸⁷ Including a rumor interaction term causes the coefficient on the rumor indicator variable, which is statistically significant in all six specifications in Table 7, to no longer be significantly different from zero in any specification. With the inclusion of a rumor interaction term, the coefficient on the post-*Newman* indicator variable remains positive in all six specifications in Table 7 *supra* and statistically significant in specifications 1, 4, and 5 at the 10% level, though not in specifications 2, 3, and 6 (p-values for these latter three specifications are 0.147, 0.138, and 0.116, respectively).

¹⁸⁸ In particular, adding the outlier events causes the coefficient on the post-*Newman* indicator variable in the first specification in Table 7 *supra* to increase from 0.036 to 0.058 and in the fourth specification to increase from 0.060 to 0.066. Adding the outlier events to specifications 2 and 3 in Table 7 causes the coefficients on both the post-*Newman* indicator and the tender offer interaction term to increase. Adding the outlier events to specifications 5 and 6 causes the coefficient on the post-*Newman* indicator variable to decrease but the coefficient on the tender offer interaction term to increase.

¹⁸⁹ With the outlier events added, the coefficient on the post-*Newman* indicator term is statistically significant at the 5% level in specification 1 in Table 7 *supra* (p-value equal to 0.026), at the 10% level in specifications 3 and 4 (p-value equal to 0.090 and 0.079, respectively), but not at the 10% level in specifications, 2, 4, and 5 (p-value equal to 0.105, 0.148, and 0.234, respectively). As with the regressions in Table 7, the coefficient on the tender offer interaction term is not significant at the 10% level in any of the six specifications with the outlier events added.

after the Second Circuit issued its decision, but the effect lessened in subsequent periods. The analysis shows that the mitigation of *Newman*'s effects on insider trading not only occurred during the period after the Ninth Circuit issued *Salman* on July 6, 2015 but also in the later part of the post-*Newman* period, before the Ninth Circuit issued *Salman*.

As discussed in Part II.A, in addition to gathering data in the pre- and post-*Newman* periods, data were also gathered on mergers announced in the ninety days after the Ninth Circuit issued *Salman*, which the Article refers to as the "post-*Salman* (Ninth) period."¹⁹⁰ The statistical analysis shows that the average run-up in the post-*Salman* (Ninth) period was 2.31%, considerably lower than the 6.35% average run-up in the post-*Newman* period, and only 0.27 percentage points higher than the pre-*Newman* average run-up. That 0.27 percentage point increase represents a 13% increase to the pre-*Newman* average run-up — compared to the more than 200% increase to the pre-*Newman* average run-up in the post-*Newman* period — and the 0.27 percentage point difference between the post-*Salman* (Ninth) and pre-*Newman* average run-up is not statistically significant.¹⁹¹ This analysis shows that *Newman*'s effects on insider trading as measured by the run-up was substantially lower in the period after the Ninth Circuit issued *Salman* than in the period before *Salman*.

But the data also indicate that *Newman*'s effect on insider trading became less pronounced even *within the post-Newman period*, i.e., before the Ninth Circuit's *Salman* decision. To see this, it is helpful to look at target run-ups graphically. For that purpose, the time period spanning the start of the pre-*Newman* period (February 16, 2014) to the end of the post-*Salman* (Ninth) period (October 4, 2015) was dissected into separate and successive twenty-day time periods.¹⁹²

Figure 2 below graphs the average run-up across these twenty-day periods. The figure demarcates the pre-*Newman* period, the post-*Newman* period, and the post-*Salman* (Ninth) period. While there is variation in the pre-*Newman* and the post-*Salman* (Ninth) period, there is no discernible visual difference between the average run-up in the

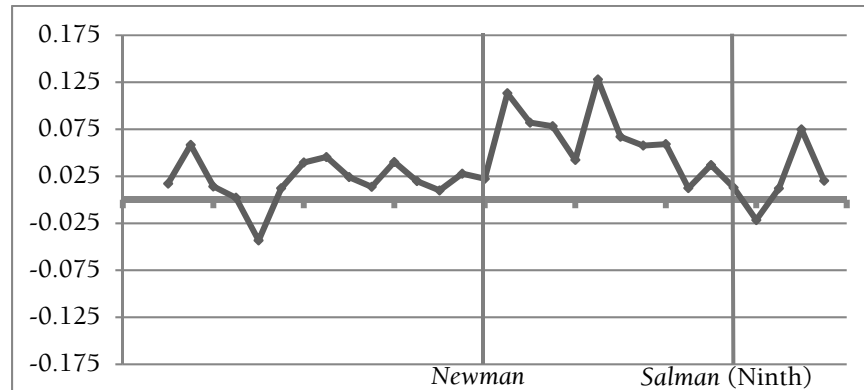
¹⁹⁰ As noted in Table 1, there are fifty-two observations in the post-*Salman* (Ninth) period, excluding an outlier event with an extreme negative run-up of -64.02%. See *supra* Table 1 and Part II.C.

¹⁹¹ The p-value associated with a t-test of equal means is 0.910. Adding the outlier event, see *supra* note 190, decreases the post-*Salman* (Ninth) average run-up to 1.05%. This average run-up is also statistically indistinguishable from the pre-*Newman* average run-up; the p-value associated with a t-test of equal means in this case is 0.709.

¹⁹² The twenty-day time period that includes *Newman*, for instance, spans November 21, 2014 to December 10, 2014. The average run-up across this twenty-day period was 2.23%.

pre-*Newman* period and the post-*Salman* (Ninth) period, as the statistical comparison above more formally shows. In addition, consistent with the discussion in Section A above, there is no discernible time trend in run-ups within the pre-*Newman* period. Those run-ups oscillate but generally stay around the 2.04% average run-up for the entire pre-*Newman* period.

Figure 2. Average Run-Up Across Twenty-Day Time Periods



Note: Figure 2 shows the average run-up across twenty-day time periods. The two vertical lines identify the twenty-day periods encompassing the day the Second Circuit issued *Newman* and the day the Ninth Circuit issued *Salman*. The period to the left of the first vertical line represents the pre-*Newman* period and the period in between the two vertical lines represents the post-*Newman* period. The area to the right of the second vertical line represents the post-*Salman* (Ninth) period. The figure excludes the outlier events discussed in Part II.C.

Figure 2 also shows that the average run-up substantially increased immediately after *Newman*. Additionally, the average run-ups depicted in Figure 2 fluctuated somewhat during the first half of the post-*Newman* period but remained higher than the pre-*Newman* average run-up. Figure 2 then shows a downward trend in the plotted average run-ups during the second half of the post-*Newman* period and indicates that by the end of the post-*Newman* period, and before the Ninth Circuit issued *Salman*, the plotted average run-ups were considerably lower than they were immediately after the Second Circuit issued *Newman*.

Table 8. Average Run-Up for Sub-Intervals of the Post-Newman Period and for the Post-Salman (Ninth) Period

	N	Average Run-up	Avg. Run-up – Avg. Pre-Newman Run-up ¹⁹³
Days 1-60 after Newman December 11, 2014- February 8, 2015	29	9.38%***	7.34***
Days 61-120 after Newman February 9, 2015- April 9, 2015	31	8.35%***	6.31**
Days 121-150 after Newman April 10, 2015- May 9, 2015	19	5.66%*	3.62
Days 151-180 after Newman May 10, 2015- June 8, 2015	19	2.66%	0.62
Day 181 after Newman to Salman (Ninth) June 9, 2015- July 6, 2015	21	3.20%	1.16
Post-Salman (Ninth) July 7, 2015- October 4, 2015	52	2.31%	0.27

Note: Table 8 shows, in column 3, the average run-up for five sub-intervals of the post-Newman period and for the post-Salman (Ninth) period. Column 4 shows the percentage point difference between the average run-up for the sub-interval and the average pre-Newman run-up (2.04%). Column 2 shows the number of observations in the sub-interval or period. Significance is denoted as ***=significant at 1%, **=significant at 5%, and *=significant at 10%. Denoted significance levels are for t-tests that the mean is zero (column 3) and that the mean run-up in the sub-interval or post-Salman (Ninth) period and the pre-Newman period are identical (column 4). The table excludes the outlier events discussed in Part II.C.

¹⁹³ Represented as a percentage point difference between the subinterval's average run-up and the pre-Newman average run-up (2.04).

Further analysis confirms that the average run-up in the post-*Newman* period eventually started decreasing in the post-*Newman* period and was significantly lower in latter parts of the post-*Newman* period than in earlier parts. This can be seen in Table 8 above, which provides in column 3 the average run-up for various sub-intervals of the post-*Newman* period and the *Salman* (Ninth) period and, in column 4, the difference between the average run-up and the average run-up for the pre-*Newman* period.

Focusing initially on the first two rows, Table 8 confirms that, as measured by the run-up, *Newman* had a dramatic effect on insider trading in the period right after the Second Circuit's decision. The average run-up for the first and second sixty-day period after *Newman* respectively was 7.34 and 6.31 percentage points higher than the pre-*Newman* average run-up, which constitute, respectively, a remarkable 360% and 309% increase to the pre-*Newman* average run-up.

Table 8 also shows that the average run-up started decreasing during latter parts of the post-*Newman* period. As shown in Table 8, the average run-up for the post-*Newman* period limited to 120-151 days after *Newman* was 3.62 percentage points higher than the pre-*Newman* average run-up, compared to the 7.34 and 6.31 percentage point differences associated with the earlier post-*Newman* sub-intervals.

The difference between the sub-interval average run-ups and the pre-*Newman* average run-up decreased further during the last two post-*Newman* sub-intervals shown in Table 8: 0.62 percentage points for the second to last sub-interval and 1.16 percentage points for the last sub-interval. These percentage point increases constitute, respectively, a 30% and 57% increase to the pre-*Newman* average run-up, which are considerably lower than the 360% and 309% increases to the pre-*Newman* average run-up in the two sub-intervals immediately after the Second Circuit's decision. In addition, as shown in Table 8, for each of these last two sub-intervals and for the preceding subinterval, the difference between the sub-interval's average run-up and the pre-*Newman* average run-up is not statistically significant.¹⁹⁴ This analysis shows that *Newman*'s pronounced effects on insider trading had lessened even before the Ninth Circuit issued its decision in *Salman*, a finding that is discussed in the next Part.

¹⁹⁴ The p-value associated with a t-test comparing the equality of the pre-*Newman* mean run-up and the mean run-up for each of these three sub-intervals in Table 8 *supra* is: 0.265 (for the sub-interval 121-150 days after *Newman*), 0.831 (for the sub-interval 151-180 days after *Newman*), and 0.671 (for the sub-interval 181 days after *Newman* to *Salman* (Ninth)).

IV. DISCUSSION AND POLICY IMPLICATIONS

The empirical findings in the previous Part demonstrate that *Newman* had an effect on insider trading as measured by merger target run-ups. This Part discusses those findings and their policy implications.

A. *The Effects of Doctrinal Change on Insider Trading*

The empirical analysis above provides strong evidence that changes in insider trading law affect the extent of insider trading, and that the effects may be dramatic. In *Newman*, the Second Circuit limited both parts of *Dirks*' rule for when a tippee trading on material, nonpublic information violates Section 10(b) and Rule 10b-5, thereby significantly weakening insider trading law as it relates to tippee liability.¹⁹⁵ The empirical analysis shows that the decision was not without consequence. While it is well-known that *Newman* affected pending insider trading prosecutions, the results above show something different: *Newman*'s weakening of insider trading law had a statistically significant effect on the amount of insider trading as measured by merger target run-ups. The difference in average target run-ups pre- and post-*Newman* persists after controlling for deal rumors and other factors and is present in each of the additional run-up periods that were evaluated in addition to the thirty-day baseline period.

The empirical analysis also shows that *Newman*'s effect on insider trading was substantial. The average run-up of merger targets in the approximate seven-month period between *Newman* and the Ninth Circuit's decision in *Salman* was more than three times higher than the average run-up of merger targets in the period before *Newman*. In its petition for certiorari seeking review of the Second Circuit's decision, the government argued that "because the widely publicized ruling [in *Newman*] raises the bar to prosecuting insider trading, it increases the chances that such conduct will proliferate The Second Circuit's decision is likely to exacerbate that phenomenon by emboldening analysts and other sophisticated market participants to engage in behavior hitherto restricted by *Dirks*."¹⁹⁶ The empirical analysis shows that the government was accurate in its prediction.

While intuition and economic theory suggest that changes in insider trading law would affect the amount of insider trading — especially by sophisticated professional traders who carefully balance the costs and

¹⁹⁵ See *supra* Part I.C.

¹⁹⁶ Petition for a Writ of Certiorari at 33, *United States v. Newman*, 773 F.3d 438 (2d Cir. 2014) (No. 15-137), 2015 WL 4572753 at *33.

benefits of their trading — it is largely unknown if that is actually the case and just how responsive traders' behavior may be to change in law. Prior empirical research assessing whether changes in insider trading law affect the amount of insider trading is relatively limited. First, as discussed further in the next Section, a number of scholars have evaluated whether changes in the *enforcement* of insider trading law — either by itself or combined with changes in insider trading law — affects the extent of insider trading, but the enforcement of insider trading law, while related, is distinct from changes in insider trading law itself. Second, largely through cross-sectional empirical studies of countries' insider trading laws, scholars also have evaluated how the enactment of insider trading law affects the extent of insider trading.¹⁹⁷ Some scholars have also empirically evaluated how SEC rules influence insider trading.¹⁹⁸

While these studies are valuable in their own right, the development of insider trading law, at least in the United States, occurs primarily through judicial decisions such as *Dirks* and *Newman*, rather than statutory or SEC rule changes.¹⁹⁹ Understanding the relationship between insider trading law and the extent of insider trading therefore necessitates an

¹⁹⁷ See, e.g., Utpal Bhattacharya & Hazem Daouk, *The World Price of Insider Trading*, 57 J. FIN. 75 (2002) (cross-sectional analysis evaluating effects of the introduction of insider trading law and initial insider trading enforcement on countries' cost of equity); Bris, *supra* note 115 (cross-sectional analysis evaluating effects of the first enforcement of insider trading law on the profits made by informed corporate insiders in advance of tender offer announcements); Abraham Ackerman, Jörn van Halteren & Ernst Maug, *Insider Trading Legislation and Acquisition Announcements: Do Laws Matter?* (Feb. 1, 2008) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=868708 (cross-sectional analysis examining relationship between insider trading legislation and information revealed to the market in the run-up phase before the announcement of corporate acquisitions); see also Laura Beny, *Do Insider Trading Laws Matter? Some Preliminary Comparative Evidence*, 7 AM. L. & ECON. REV. 144 (2005) [hereinafter *Preliminary Comparative Evidence*] (developing a measure of the strength of insider trading law and using that measure to perform cross-sectional analysis empirically analyzing how the strength of countries' insider trading laws affects the diffusion of equity ownership, the accuracy of stock prices, and stock market liquidity); Laura Beny, *Do Investors in Controlled Firms Value Insider Trading Laws? International Evidence*, J.L. ECON. & POL'Y 267 (2008) [hereinafter *Do Investors Value Insider Trading Laws*] (cross-sectional analysis evaluating whether the strength of countries' insider trading laws and the extent of their insider trading enforcement affects corporate valuation).

¹⁹⁸ See, e.g., Anup Agarwal & Jeffrey Jaffe, *Does Section 16b Deter Insider Trading by Target Managers?*, 39 J. FIN. ECON. 295 (1995); M. Todd Henderson, Alan D. Jagolinzer & Karl A. Miller, III, *Offensive Disclosure: How Voluntary Disclosure Can Increase Returns from Insider Trading*, 103 GEO. L.J. 1275 (2015).

¹⁹⁹ See Jill E. Fisch, *Constructive Ambiguity and Judicial Development of Insider Trading*, 71 SMU L. REV. 749 (2018).

understanding of how judicially-generated changes in insider trading law influence insider trading activity. Prior research has focused its analysis on the effects of insider trading cases on one specific category of traders — corporate insiders — and the empirical findings of those papers are mixed.²⁰⁰ This Article's empirical analysis, instead, does not limit itself to evaluating the effects of judicially-generated changes in insider trading law on just corporate insiders but instead encompasses the effects on insider trading generally, regardless of trader type.

The empirical analysis further indicates that depending on the nature of the legal change, insider trading can be extremely responsive to changes in the law. As shown in Part III.D above, in the period immediately following *Newman*, the average target run-up shot up from about 2% in the pre-*Newman* period to approximately 9.4% in the sixty-day period after *Newman* — a more than 350% increase in the average run-up.

The analysis also indicates that *Newman*'s substantial effects on insider trading as reflected by target run-ups abated after subsequent developments in the law. First, in *Salman*, the Ninth Circuit rejected the defendant's request to adopt *Newman* and created a circuit split on the scope of tippee liability that the Supreme Court would ultimately address in its *Salman* decision. Consistent with the Ninth Circuit's more expansive articulation of the scope of tippee liability in *Salman* compared to the Second Circuit's articulation in *Newman*, average run-ups in the period analyzed after *Salman* were considerably lower than the average run-ups in the post-*Newman* period. In addition, the average run-up in the analyzed period after the Ninth Circuit's *Salman* decision was just 0.27 percentage points higher than the average run-up in the pre-*Newman* period²⁰¹ — much less than the difference between the post-*Newman* average run-up and the pre-*Newman* average run-up —

²⁰⁰ For example, in an early important paper, Jaffe examined how the district court decision giving rise to the Second Circuit's *Texas Gulf Sulphur* decision, as well as the SEC's filing of the complaint in that case and the SEC's *Cody, Roberts* decision, affected the trading patterns of corporate insiders. Jaffe, *supra* note 110, at 105. Jaffe finds that those cases and the filing of the complaint had no significant effect on the volume or profitability of corporate insiders' trades. *Id.* at 114. Seyhun examined whether the Supreme Court's *Chiarella* decision, and the enactment of Insider Trading and Securities Fraud Enforcement Act of 1988, affected the volume and profitability of trading by insiders. Seyhun, *supra* note 110. While the statutory change had no effect, Seyhun finds that, in contrast to Jaffe, that the change in case law affected the volume and profitability of trades by corporate insiders. *Id.* at 150-51; *see also* Steven A. Allen, *The Response of Insider Trading to Changes in Regulatory Standards*, 29 Q.J. BUS. & ECON. 47 (1990) (conducting further empirical analysis on the effects of *Texas Gulf Sulphur* on trading by corporate insiders).

²⁰¹ *See supra* Table 8.

and the difference lacks statistical significance at any conventional level of significance.

It would be incorrect, however, to conclude that the mitigation to *Newman*'s effect on insider trading started only after the Ninth Circuit issued *Salman*. As shown in Part III.D, average run-ups in the latter parts of the post-*Newman* period were lower than the average run-ups in the earlier parts of the post-*Newman* period. This identified downward trend in the average run-up in the latter parts of the post-*Newman* period is an interesting empirical finding. While no appellate decision during this time rejected or even addressed *Newman*'s paring back of the scope of tippee liability, the average run-up in the post-*Newman* period started decreasing. There are several possible explanations for the eventual downward reversion in the average run-up in the post-*Newman* period, but a likely candidate is the further evolution in the law that occurred in the latter part of the post-*Newman* period.

As discussed in Part I.D, in the months following *Newman*, district courts issued rulings circumscribing the perceived reach of *Newman*²⁰² — most notably, *SEC v. Payton*,²⁰³ in which Judge Rakoff distinguished between the heightened standards for criminal liability at issue in *Newman* and the lower standards for civil liability at issue in SEC actions. In response to these decisions, legal commentators began cautioning hedge funds and other professional traders to mitigate their reliance on *Newman* when structuring their trading activities²⁰⁴ and explained that cases like *Payton* show that remote tippees remain subject to SEC civil enforcement and substantial civil liability.²⁰⁵

While the decisions in the period between *Newman* and the Ninth Circuit's *Salman* decision were district court opinions, and thus would

²⁰² See *supra* notes 86, 88 and accompanying text.

²⁰³ 97 F. Supp. 3d 558 (S.D.N.Y. 2015).

²⁰⁴ See *supra* note 89.

²⁰⁵ See, e.g., *Remote Tippees Beware: Even if the DOJ Can't Reach You After Newman, the SEC Can*, ORRICK, HERRINGTON & SUTCLIFFE LLP (Apr. 14, 2015), <http://blogs.orrick.com/securities-litigation/2015/04/14/remote-tippees-beware-even-if-the-doj-cant-reach-you-after-newman-the-sec-can/> (explaining that the SEC is likely to rely on *Payton* to frame its claims against remote tippees); see also Tom Gorman, *Insider Trading: Does Payton Begin the Erosion of the Newman Tipping Test?*, SEC ACTIONS (Apr. 12, 2015), <http://www.secactions.com/insider-trading-does-payton-begin-the-erosion-of-the-newman-tipping-test/>. The SEC also made clear that it would pursue more insider trading cases in administrative proceedings than in the courts. See Yin Wilczek, *SEC to Pursue More Insider Trading Cases in Administrative Forum*, *Ceresney Says*, BLOOMBERG LAW (June 11, 2014, 9:00 PM) <https://news.bloomberglaw.com/white-collar-and-criminal-law/sec-to-pursue-more-insider-trading-cases-in-administrative-forum-ceresney-says>.

have had less precedential import than an appellate decision such as *Newman*, they still nonetheless exerted a mitigating effect on *Newman*'s influence on insider trading. In addition to cabinining the perceived scope of *Newman*, these lower court decisions infused ambiguity into aspects of *Newman* that had seemingly established clear rules for tippee liability, such as the requirement that the tippee know that the tipper received a personal benefit. As demonstrated by economic models of deterrence, ambiguity in the law can facilitate deterrence.²⁰⁶

As measured by target run-ups, *Newman*'s effect on insider trading was considerably lower in the latter parts of the post-*Newman* period than in the period immediately after the Second Circuit issued its decision. Of the various sub-intervals of the post-*Newman* period analyzed in Part III.D, the average run-up in the sub-interval immediately after *Newman* was almost three times higher than in the sub-interval immediately before the Ninth Circuit's *Salman* decision (9.38/3.20=2.93). As this analysis shows, *Newman*'s substantial effect on insider trading lessened over time.

The empirical findings concerning the control variables used in the analysis are also informative. Consistent with prior research, the empirical analysis shows that deal rumors have a substantial and statistically significant effect on the run-up in the stock price of merger targets. A failure to control for deal rumors when using target run-ups as a measure of insider trading can lead to erroneous policy conclusions. Even if a change in law generates no discernible effect to target run-ups, the legal change nonetheless still may have had a significant effect on insider trading if a dissimilar fraction of deals were the subject of rumors before the change in law than after.

Analysis of the tender offer control variable yields another interesting empirical finding. Like insider trading in connection with other deal types, insider trading in connection with a tender offer is prohibited under Section 10(b) and Rule 10b-5, but also is subject to the specific tender offer prohibition of Rule 14e-3.²⁰⁷ Because Rule 14e-3 was not at issue in *Newman*, it may be that *Newman*'s effect on the extent of insider trading was different for tender offers than other deal types. This is not reflected in the empirical analysis, which evidenced no statistically significant difference between *Newman*'s effect on insider trading in

²⁰⁶ See, e.g., Richard Craswell & John E. Calfee, *Deterrence and Uncertain Legal Standards*, 2 J.L. ECON. & ORG. 279, 279-80 (1986) (developing an economic model of deterrence in which uncertainty about the legal standard generates over-compliance or under-compliance with the standard).

²⁰⁷ See *supra* Part I.A.

advance of tender offers and its effect on insider trading in advance of other deal types.

One explanation for this latter finding is that while traders understood *Newman* to have limited the scope of tippee liability, and accordingly modified their trading behavior in response, they did not base their behavioral decisions on the legal nuances between Section 10(b) and Rule 10b-5, which were at issue in *Newman* and which predicate liability in a classical case on breach of fiduciary duty, and Rule 14e-3, which does not require a breach of fiduciary duty.²⁰⁸ Indeed, in the period after *Newman*, no court appears to have issued any written opinion addressing *Newman*'s applicability to Rule 14e-3.

B. Enforcement of Insider Trading Law

The empirical findings in Part III also directly inform and relate to prior research on the effects of increased enforcement of insider trading law on insider trading. A number of scholars have evaluated whether increased enforcement of insider trading law influences the amount of insider trading and other relevant factors pertinent to insider trading.²⁰⁹ Scholars have also evaluated the relationship between the combined effects of enhanced enforcement of insider trading law and the judicial strengthening of insider trading law on insider trading.²¹⁰ Though not

²⁰⁸ See *United States v. Crestman*, 947 F.2d 551, 557 (2d Cir. 1991) (en banc) (“[Rule 14e-3] creates a duty in those traders who fall within its ambit to abstain or disclose, without regard to whether the trader owes a pre-existing fiduciary duty to respect the confidentiality of the information.”).

²⁰⁹ One of the earliest studies is by Bhattacharya and Daouk, who conduct a cross-sectional analysis of nations' insider trading laws. Bhattacharya & Daouk, *supra* note 197. They look at the effects of insider trading law on the cost of equity and find that while a nation's cost of equity does not change after the introduction of insider trading law, cost of equity decreases significantly after first enforcement of the law. See *id.* Empirical research that more directly evaluates the relationship between greater enforcement of insider trading law and the amount of insider trading includes: Del Guercio et al., *The Deterrent Effect*, *supra* note 115 (finding that increased SEC enforcement of insider trading decreased insider trading); Chira & Madura, *supra* note 115 (finding that the filing of the complaints in the *Galleon* case decreased insider trading); Beny & Seyhun, *supra* note 109 (finding a *positive* relationship between the level of insider trading enforcement and the amount of insider trading); Bris, *supra* note 115 (finding that increased enforcement of insider trading law *increases* both the incidence and profitability of insider trading); Ackerman et al., *supra* note 197 (finding that increased enforcement of insider trading has a small but often undetectable effect on insider trading). See also Beny, *Preliminary Comparative Evidence*, *supra* note 197; Beny, *Do Investors Value Insider Trading Law*, *supra* note 197.

²¹⁰ Tanimura and Wehrly empirically evaluate whether enhanced SEC enforcement of insider trading law and judicial and other changes in insider trading law had an effect on insider trading. Tanimura & Wehrly, *supra* note 117. Tanimura and Wehrly compare

uniformly the case, these studies generally find that increased enforcement of insider trading law results in less insider trading, all else equal.²¹¹

An important finding documented by these and other papers of empirical insider trading is that, as measured by the run-up, the amount of insider trading is significantly lower in more recent decades than in earlier decades. The Article's empirical findings show that *Newman* substantially disrupted the general downward trend in target run-ups and caused insider trading levels as reflected by target run-ups to temporarily revert back to levels not seen in years.

For example, using a twenty-day run-up length, Del Guercio, Odders-White, and Ready estimated the average run-up for merger targets across various time blocks spanning 1981 to 2013.²¹² For the periods 1981-1985 and 1986-1990, the authors find that the average run-up was 7.2% and 8.1%, respectively, which, when combined with the authors' calculated average deal premium, implies a run-up ratio of 42.1% and 34.2%, respectively.²¹³ The authors find that these amounts are substantially smaller in later years. For the final two periods they examine — 2006-2010 and 2011-2013 — the authors find that the average run-up was only 2.6% in both periods, which implies a run-up ratio of 10.1% in 2006-2010 and 8.5% in 2011-2013.²¹⁴ The authors

insider trading in the period 1935-1951 with insider trading in the period 1962-1974. The authors attribute the former period to low levels of SEC enforcement of insider trading law and relatively weak insider trading law and the latter period to heightened levels of enforcement and stronger insider trading law, including the SEC's *Cody*, *Roberts* decision (issued in 1961), the district court and Second Circuit decisions in *Texas Gulf Sulphur* (issued in 1966 and 1968, respectively), and the Second Circuit's decision in *Shapiro v. Merrill Lynch*. *See id.* at 1-2, 24-26. Tanimura and Wehrly use three measures of insider trading and find that the enhanced SEC enforcement and stronger insider trading law diminished insider trading with respect to each of those three measures. *See id.* at 2.

²¹¹ *See supra* notes 209, 210 and accompanying text.

²¹² *See* Del Guercio et al., *Online Appendix*, *supra* note 150, at 22; *see also* Schwert, *supra* note 131, at 165 (documenting yearly average run-ups for 1975-1991).

²¹³ *See* Del Guercio et al., *Online Appendix*, *supra* note 150, at 22 (for 1981-1985, average run-up of 0.072 and average deal premium (referred to as "Total Return") of 0.171 for 1986-1990; average run-up of 0.081 and average deal premium of 0.237). The calculated average run-ups and run-up ratios for these earlier time periods are similar to amounts identified in earlier studies. *See* Jarrell & Poulson, *supra* note 107, at 233 (tender offers from 1981-1985); Keown & Pinkerton, *supra* note 107, at 860 (mergers from 1975-1978).

²¹⁴ *See* Del Guercio et al., *Online Appendix*, *supra* note 150, at 22 (for 2006-2010, average run-up of 0.026 and average deal premium of 0.257; for 2011-2013, average run-up of 0.026 and average deal premium of 0.307). *But see* Beny & Seyhun, *supra* note 109 (analyzing average run-ups in three time periods and finding that the average

attribute the decrease in these amounts to increased SEC enforcement of insider trading law.²¹⁵

Using the same twenty-day run-up length as Del Guercio, Odders-White, and Ready, the average run-up in the pre-*Newman* period (February 16, 2014 to December 10, 2014) was 1.70%,²¹⁶ which corresponds to a run-up ratio of almost 7%.²¹⁷ Therefore, putting aside any differences in the configurations of the two samples and estimation technique,²¹⁸ and focusing just on sample results, the relatively low levels of the average run-up and the run-up index that Del Guercio, Odders-White, and Ready identified in the mid-2000s and early 2010s continued and, in fact, further decreased in the pre-*Newman* period. Del Guercio, Odders-White, and Ready's empirical findings would suggest that these low pre-*Newman* levels of the average run-up and the run-up index were the direct consequence of the enhanced governmental enforcement of insider trading discussed in Part I.B.

The empirical analysis shows that *Newman* affected the general downward trend in run-ups and caused them to temporarily revert back to historically high levels. Looking just at the first 120 days after *Newman*, the average run-up using a twenty-day run-up length was 7.35%, which corresponds to a substantial run-up ratio of almost 43%.²¹⁹ These values are considerably higher than the comparable values for the pre-*Newman* period and similar in magnitude to the extremely high levels documented in the 1980s.

run-up decreased in only one adjacent pair of those three time periods and increased in the other adjacent pair).

²¹⁵ Del Guercio et al., *The Deterrent Effect*, *supra* note 115, at 272.

²¹⁶ *See supra* Table 3.

²¹⁷ For the pre-*Newman* period, the average deal premium associated with a twenty-day run-up length is 25.46, so the run-up ratio for the pre-*Newman* period associated with a twenty-day run-up length is $1.70/25.46=6.68\%$. *See supra* Table 3.

²¹⁸ Del Guercio, Odders-White, and Ready similarly use SDC Platinum for their merger data, but exclude merger announcements where the target's share price is less than \$1 or the target's market capitalization is less than \$10 million. *See* Del Guercio et al., *Online Appendix*, *supra* note 150, at 22. Del Guercio, Odders-White, and Ready's event studies also use a market model but with an estimation length of 125 days starting twenty-one days prior to the merger announcement. *See id.*

²¹⁹ For the 120 days after *Newman*, the average deal premium associated with a twenty-day run-up length is 17.34, so the run-up ratio for the 120 period after *Newman* associated with a twenty-day run-up length is $7.35/17.34=42.39\%$.

C. *The Optimal Regulation of Insider Trading*

The empirical findings also inform academic debates concerning the optimal regulation of insider trading.²²⁰ A number of legal scholars have argued that various policy goals would be better served if Congress were to enact a statute expressly defining and prohibiting insider trading.²²¹ The leading reason proffered as to why an insider trading statute is needed is the murkiness of insider trading law, which has developed over the years in a piecemeal fashion through judicial decisions that, owing to the very nature of common law jurisprudence, often lack clear or enduring demarcations between what is and what is not unlawful conduct.²²² Judges themselves have pointed to the lack of clarity in the law as the basis for an insider trading statute.²²³

²²⁰ A fundamental, though now somewhat subdued, debate is whether insider trading should be regulated at all. See, e.g., HENRY G. MANNE, *INSIDER TRADING AND THE STOCK MARKET* (1966); Carlton & Fischel, *supra* note 1; Cox, *supra* note 2, at 629-30; see also Saul Levmore, *In Defense of the Regulation of Insider Trading*, 11 HARV. J.L. & PUB. POL'Y 101 (1988). This Article does not wade into this debate and instead takes as given the regulation of insider trading. For a discussion of the leading arguments for and against regulating insider trading, see BAINBRIDGE, *supra* note 17, at 175-211.

²²¹ See, e.g., James D. Cox, *Choices: Paving the Road Towards a "Definition" of Insider Trading*, 39 ALA. L. REV. 381, 381 (1988) ("[I]t is imperative that Congress define insider trading."); Karmel, *supra* note 4, at 758 ("[T]he SEC should advocate for a statutory definition of this currently undefined crime [of insider trading]."); Donald Langevoort, *Setting the Agenda for Legislative Reform: Some Fallacies, Anomalies, and Other Curiosities in the Prevailing Law of Insider Trading*, 39 ALA. L. REV. 399, 399 (1988) ("The case for legislative reform in the area of insider trading is compelling."); John C. Coffee Jr., *Opinion, How to Get Away With Insider Trading*, N.Y. TIMES (May 23, 2016), <https://www.nytimes.com/2016/05/23/opinion/how-to-get-away-with-insider-trading.html?mcubz=1> ("Although the S.E.C. has resisted defining insider trading for decades, legislation now seems the best answer.").

²²² See, e.g., Miriam A. Baer, *Insider Trading's Legality Problem*, 127 YALE L.J. F. 129, 145 (2017) ("[T]here are drawbacks to the type of piecemeal lawmaking typified by the Supreme Court's insider trading jurisprudence, particularly in regard to criminal law."); Jill E. Fisch, *Start Making Sense: An Analysis and Proposal for Insider Trading Regulation*, 26 GA. L. REV. 179, 184 (1991) ("[T]he doctrine under which insider trading is regulated is seriously flawed. Many of the flaws can be attributed to the fact that insider trading regulation has been developed on an ad hoc basis"); Coffee, *supra* note 221 ("[N]either Congress nor the S.E.C. has ever defined 'insider trading' in a comprehensive way. So our laws are largely made by judges who, bound by precedent, rarely update law to fit new circumstances.").

²²³ Carmen Germaine, *Rakoff Urges Securities Bar to Write Insider Trading Law*, LAW360 (Mar. 1, 2017, 8:36 PM), <https://www.law360.com/articles/897188/rakoff-urges-securities-bar-to-write-insider-trading-law> ("U.S. District Judge Jed S. Rakoff urged securities lawyers . . . to write a statute prohibiting insider trading, lamenting that enforcement of what is now judicially-created law had grown complicated and uncertain."); see also A.C. Pritchard, *Justice Lewis F. Powell, Jr. and the Counterrevolution in the Federal Securities Laws*, 52 DUKE L.J. 841, 934 (2003) (citing a Feb. 4, 1980 letter

The empirical analysis above provides an additional argument in favor of an insider trading statute. The analysis shows that traders modify their behavior in response to judicially created changes to insider trading law and that judicial modifications to insider trading law such as in *Newman* can inadvertently result in significant swings in the amount of insider trading. As courts continuously vary insider trading law,²²⁴ the amount of insider trading will fluctuate in response, without any apparent connection to whether the resulting change in the amount of insider trading is or is not socially desirable relative to the costs, such as enforcement and compliance costs. A determination of the appropriate level of insider trading — which involves a policy assessment that compares the social costs of insider trading with enforcement and compliance costs, as well as the potential social benefits of insider trading that some scholars have identified²²⁵ — is better left to Congress than the courts.

The empirical results also reflect the common-sense principle that enforcement alone may not be an effective means of regulation. The empirical analysis suggests that the effects of enhanced enforcement of insider trading law on lessening the amount of insider trading may be thwarted if courts (or legislatures or agencies) modify the scope of insider trading law in a manner that makes prosecution of insider trading more difficult.²²⁶

from Justice Powell to Justice Stevens in which Justice Powell states “[a]s we are talking about criminal liability, I am inclined to think we should leave it to Congress to draft a more refined and specific criminal [insider trading] statute”).

²²⁴ The Second Circuit further modified the scope of tipper-tippee liability in *United States v. Martoma*, 894 F.3d 64 (2nd Cir. 2018). In that case, which the Second Circuit first issued in 2017 and then substantially amended in 2018, the court addressed *Newman*'s rule that the gift-giving principle applies only if the tipper and tippee had a meaningfully close personal relationship. *See id.* at 77 (holding that a meaningfully close personal relationship is not necessary if there is evidence of a relationship between the tipper and tippee that suggests a quid pro quo or a tipper's intent to benefit the tippee).

²²⁵ *See, e.g.*, MANNE, *supra* note 220; Carlton & Fischel, *supra* note 1.

²²⁶ Of course, changes in insider trading law may also modify the severity of the sanctions imposed for unlawful insider trading, and any such changes in the severity of sanctions may also affect the amount of insider trading. *See, e.g.*, Thomas H. Eysell & James P. Reburn, *The Effects of the Insider Trading Sanctions Act of 1984: The Case of Seasoned Equity Offerings*, 16 J. FIN. RES. 161 (1993); Jin Xu, *New Evidence of the Effects of the Insider Trading Sanctions Act of 1984* (Feb. 20, 2008) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=11006411.

D. *Additional Avenues for Future Research*

The analysis and discussion above suggest several other avenues for future research. First, the methodology of using run-ups as a measure of insider trading can be used to empirically evaluate the extent to which other changes in insider trading law affect the amount of insider trading. In addition to more recent changes in insider trading law and any future Supreme Court decision modifying the scope of tippee liability, the methodology can be used to empirically evaluate the effects of the historical pillars of insider trading law, such as the Supreme Court's *Chiarella* and *Dirks* decisions. The empirical analysis can also evaluate insider trading in connection with non-merger events similarly known to generate insider trading, such as earnings announcements.²²⁷

Second, the empirical analysis also raises interesting questions about the specific mechanism that caused traders to change their behavior in response to *Newman*. Research in perceptual deterrence seeks to ascertain the interplay between changes in the perceptions of the law and changes in criminal behavior.²²⁸ This research is grounded in the proposition that a change in law will affect behavior only if individuals are aware of the change in law. For example, if the legislature enacts a statute amplifying sanctions for certain unlawful conduct, the statute may have no effect on modifying behavior if individuals are unaware of the statutory change.²²⁹

As discussed above, *Newman* was the subject of significant academic, legal, and popular discussion.²³⁰ For instance, numerous law firms issued client alerts immediately after *Newman* explaining how and the extent to which the case reshaped the scope of tippee liability.²³¹ Future

²²⁷ See, e.g., Reeb et al., *supra* note 116.

²²⁸ For discussion and surveys of perceptual deterrence research, see Robert Apel, *Sanctions, Perceptions, and Crime: Implications for Criminal Deterrence*, 29 J. QUANT. CRIMINOLOGY 67 (2013); Aaron Chalfin & Justin McCrary, *Criminal Deterrence: A Review of the Literature*, 55 J. ECON. LIT. 5, 10-12 (2017).

²²⁹ See Michael Tonry, *Learning from the Limitations of Deterrence Research*, 37 CRIME & JUST. 279, 285 (2008).

²³⁰ See *supra* notes 81–83, 89.

²³¹ See, e.g., RICHARD D. OWENS, CHRISTOPHER J. CLARK & HA-TRANH NGUYEN, LATHAM & WATKINS LLP, CLIENT ALERT: SECOND CIRCUIT REDEFINES “PERSONAL BENEFIT” IN INSIDER TRADING CASE (2014), <https://www.lw.com/thoughtLeadership/lw-personal-benefit-decision-insider-trading>; HELEN V. CANTWELL ET AL., *supra* note 82 (Debevoise & Plimpton LLP client update on Dec. 11, 2014); Susanna M. Buerger et al., *Second Circuit Rules for Defendants in Landmark Insider Trading Case*, PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP (Dec. 11, 2014), <https://www.paulweiss.com/practices/litigation/white-collar-regulatory-defense/publications/second-circuit-rules-for-defendants-in-landmark-insider-trading-case?id=19093>; *Scope of Criminal Insider Trading Liability for Remote Tippees*,

work can draw upon the insights of perceptual deterrence research to understand the extent to which changes in traders' behavior following shifts in insider trading law are driven by traders' perceptions of the legal change. Future research can also analyze whether and the extent to which traders' perceptions about the likelihood of liability for insider trading are more salient factors in generating changes in insider trading behavior than traders' perceptions of the expected legal sanction.

Finally, the empirical results also highlight the importance of additional research seeking to identify the extent of informational exchanges occurring between public companies and traders such as hedge funds and other professional traders. While *Newman* affected only one aspect of insider trading liability — i.e., insider trading liability as it relates to tippee liability — the change in law resulted in a substantial increase in insider trading as measured by merger target run-ups. These results suggest that in the absence of significant legal prohibitions, considerable non-public, material information may directly or indirectly flow from public companies to market traders. Additional research into the nature of this information exchange would allow enforcement resources to better identify and more closely target the most pervasive disclosure of confidential trading information.

CONCLUSION

This Article used the change in law caused by the Second Circuit's decision in *United States v. Newman* to empirically evaluate whether changes in insider trading law affect the amount of insider trading. The Article found that as reflected by run-ups in the stock price of merger targets, *Newman* had a substantial effect on insider trading, with the average target run-up in the analyzed period after *Newman* being more than three times higher than in the period before *Newman*. The Article also found that *Newman*'s amplification of insider trading as measured by target run-ups dampened in the period leading up to and after the Ninth Circuit's decision in *United States v. Salman*. These and the Article's other empirical findings provide compelling evidence that changes in insider trading law do generate changes in the amount of insider trading and that those effects can be substantial.